MILITARY ILLUSTRATED

£2.80 March 1994 Number 70

Zulu Warriors

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Panzerfaust

Shark-tooth Crusaders

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March 1994 Number 70 ISSN 0268-8328

Military Illustrated

Past & Present

Front cover
Zulu warrior at Isandlwana photographed by Ian Knight. The warrior wears a leopard skin umqele headdress and calf-skin umcilo bandoliers with bunches of tails – usually monkey – hanging over his hips.

Back cover
US Infantryman of 1898, serving in the Spanish-American War, armed with Krag-Jorgensen magazine rifle. Painting by Frederic Remington, 1901.

Published monthly by
Military Illustrated Ltd.
Editor: Tim Newark
43 Museum Street,
London WC1A 1LY
071 404 0304

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43 Museum Street,
London WC1A 1LY
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Typesetting:
PRS Ltd, 2 Avro Court,
Lancaster Way,
Ermine Business Park,
Cambridgeshire PE18 6XS
0480 414347

Printing: The Grange Press,
Butts Road, Southwick,
West Sussex BN4 4EJ

UK newsagent distribution:
United Magazines
Distribution Ltd.
1 Benwell Rd., London N7 7AX
071 700 4600

Subscription service:
Military Illustrated
c/o Lowtherbond Ltd.
17 Bushby Avenue,
Rustington,
W. Sussex BN16 2BY
0903 775121.
Publisher's subscription rates
for 12 issues (one year):
UK, £35; other European,
£50; by Airspeed – USA,
$100; other non-European,
£60: all payments in sterling
or US dollars.

Military Illustrated Past &
Present is published monthly
by Military Illustrated Ltd.
The subscription price is $100
for one year. Mercury
Airfreight International Ltd.,
2323 E-F Randolph Avenue,
Avenel, NJ 07001 (US Mailing
Agent). Second class postage
paid at Rahway, NJ, USA.

The New Magazine

This month sees a new chapter in the history of our magazine. As the new editor of *Military Illustrated*, I want to consolidate its reputation as the primary source of information for military historians, enthusiasts, modellers, wargamers, and re-enactors. We will publish regular features on weapons, uniforms, World War Two, the Napoleonic Wars, Colonial Wars, and military art, but we also hope to reach out to new readers with a broader range of periods and interests including ancient, medieval, and contemporary warfare, as well as a series on extraordinary warriors and strange campaigns; I hope you'll want to add some of your own to this. I also want to ensure that *Military Illustrated* remains *the* showcase for the best in military illustration in the world and I am already commissioning dramatic plates and battle scenes from top military artists.

The strength of *Military Illustrated* lies in the specialist knowledge of many of its readers and I want to open up its pages to new contributors. Readers letters commenting on the magazine and its articles, pointing out where you think I'm going wrong, where I'm getting it right, and what you would like to read, are also most welcome. Send in your views on recently published books as well. This magazine is your point of communication to all other military enthusiasts in Britain, Europe, and America.

Finally, next month sees the launch of a major two-part D-Day competition with a magnificent first prize as well as other D-Day related prizes. I look forward to editing the new *Military Illustrated* and to hearing from you.

Tim Newark
Editor

Yugoslavia

I can live with the SS if I have to, but please give Yugoslavia a rest. Nearly a quarter of your February issue dealt with Serb and Croat 'fighters' and previous issues have featured them in similar proportions. I understand your desire to cover contemporary conflicts as well as historical ones, but don't you think this is overdoing it? I do not seek to belittle the horror of current events in the former republic, but

The Editor at Tyne Cot, Ypres.

feel that little is gained by portraying what are in most cases no better than bandits, as though they were soldiers fit to take their place alongside Napoleon's Cuirassiers or the Northamptonshire Yeomanry.

J.E.M. Spilsbury
Warwickshire

Waffen SS

The main reason why I buy MI is because it contains interesting articles on the Waffen SS and the German armed forces. Without any doubt the Waffen SS were responsible for atrocities and this remains unforgivable. But then so were the Allied armies. The only difference is that the atrocities committed by the Waffen SS were made well known, on the other hand the atrocities committed by the Allies were covered up and remain so till this day. The fact that the Waffen SS fought for an evil or wrong cause is highly irrelevant. The men of the Waffen SS were among the best fighters in the world and that cannot be denied.

Fariz Farook
Kuala Lumpur

Terrorists

I have followed the correspondence over the issue of whether or not MI contained too much cover of Nazi Germany with some interest. My own view was that although I have little personal interest in such things others have and their interests must be catered for, as mine in the Napoleonic and First World War periods are. But having just finished a first brief scan of the February issue I must write to say enough is enough. Last month I was surprised by the amount of cover given to the murderous thugs at present masquerading as soldiers of the former Yugoslavia but dismissed the matter as a temporary aberration. But now I find it repeated this month.

Please leave these thugs in the obscurity they deserve and do nothing more to encourage them or their admirers in the mistaken belief that they are soldiers. What ever next? The uniforms and ideals of the provisional IRA? Terrorists are terrorists and warriors are warriors, the two do not meet, and the former should not grace the pages of MI.

Major Edwin Parks
Guernsey

Lancashire Hussars

I was delighted to see David Barton's letter regarding the Lancashire Hussars in *MI* 68, especially his note regarding the formation of the fourth troop in 1860. I remain unrepentant however regarding the tenuousness of the connection between the Ashton Volunteer Cavalry and the Lancashire Hussars for the following reasons.

The Ashton Cavalry were never more than a troop of about 60 in strength, and though there was a family link through their commander Captain William Gerard, they were disbanded in 1823. According to the limited information available they wore blue uniforms with red facings and white breeches. Whilst the Ashton Cavalry were disbanded other mounted volunteer units in the County were amalgamated to form the 'Lancashire Corps of Yeomanry Cavalry' which became in 1834 the Duke of Lancaster's Own.

The Lancashire Hussars were formed 25 years after the disbandment of the Ashton Cavalry by Sir John Gerard, nephew of William Gerard. Since the Duke of Lancaster's Own were the senior Yeomanry regiment in the County, the Hussars had to be content with second billing in the 1850 Militia and Yeomanry List. Nor can it be claimed that 'A' troop was solely drawn from Ashton. The *Southport Visitor* (13 May 1864) refers to A troop from 'Ashton, Warrington and district'. Most of A troop officers also came from elsewhere.

Stephen Bull
Lancashire

British line at battle of Culloden.

Viking Wars (Cromwell: E)
Bannockburn (Cromwell: E)
Culloden (Cromwell: E)
Trafalgar (Cromwell: E)
Austerlitz (Cromwell: E)
Balaclava (Cromwell: E)
Rebel Sabres (Cromwell: E)

Cromwell have released eight more titles in their excellent *Campaigns in History* series. As usual, they include extracts from feature films, graphics, acted sequences and contemporary prints and engravings. Computer graphics are used to explain the strategy and tactics underlying each battle. Each programme includes contributions from Dr David Chandler, recently retired Head of the War Studies Department at the Royal Military Academy, Sandhurst.

Viking Wars tells the story of Viking raids on the British Isles from AD 787 to 1066. Actor Brian Blessed's narration draws from the *Anglo-Saxon Chronicle*, the unique contemporary record of the era. Re-enactors from the Norse Film and Pageant Society, complete with two full-scale authentic 'dragon-ships', are filmed on Lindisfarne, exactly 1,200 years after the first Viking raids there. The useful accompanying booklet includes excerpts from the *Chronicle*, a brief history of the Viking period, and an introduction to Norse mythology.

Bannockburn explains the battle that in 1314 formed the climax of the Scottish War of Independence. The battle is portrayed with the help of a number of re-enactment societies, filmed on Cannock Chase in Staffordshire. Included is a booklet which describes a number of battles between the English and the Scots, from The Standard in 1137 to Shrewsbury in 1403.

Culloden tells the story of the ill-fated attempt by Charles Edward Stuart (Bonnie Prince Charlie) to take the throne of

The video well explains the tactics used during the battle and the use of weapons. The battle is illustrated by specially shot material which utilises re-enactment societies such as the Napoleonic Association and Sam Jones Regiment of Foot who enthusiastically recreate the 'last great Highland charge' on Cannock Chase. David Chandler and author and military historian Stuart Reid provide comments, filmed on the actual battlefield. The video comes with an interesting booklet the *Memoirs of the Rebellion* written by James Johnstone, who served as aide-de-camp of Lord Murray, and as a Captain of Artillery in the Jacobite army.

Trafalgar tells the story of the 1805 sea battle which ended Napoleon's dreams of invading England. Actor Robert Powell's narration compares the personalities of Admiral Nelson and Admiral Villeneuve, in command of the combined French and Spanish fleets. An actor impersonating English seaman William Robinson quotes from Robinson's book (writing under the name Jack Nastyface) *Nautical Economy* which gives a vivid impression of life below decks in Nelson's navy. The accompanying booklet is an abridged version of the Robinson's text. Film extracts include Lewis Gilbert's 1962 film *HMS Defiant* (US title *Damn the Defiant!*), and the ITC television production *I Remember Nelson*.

His invasion plans thwarted, Napoleon turned on the Third Coalition by invading Austria. *Austerlitz* tells the story of the decisive battle between the French and the combined Austrian and Russian armies in what became known as the 'Battle of the Three Emperors'. The narration is delivered by Brian Blessed. The programme utilises extracts from both the Austerlitz and Borodino sequences from Sergei Bodnarchuk's *War and Peace* (*Voina I Mir*) (1963-67). An actor impersonates French captain Coignet of the Old Guard, quoting his own diaries: the book accompanying the video consists of extracts from notebook IV to VI, which covers the years 1804 to 1811.

Balaclava tells the story of the Crimean War battle which culminated in the disastrous charge of the Light Brigade. Brian Blessed again narrates. The programme draws extensively from Tony Richardson's 1968 film *The Charge of the Light Brigade*. An actor impersonates Lieutenant-Colonel S.J.C. Calthorpe of the Heavy Brigade who quotes from his *Letters from Headquarters*. The accompanying book consists of extracts from the work which was written to deflect criticism of the debacle away from Lord Raglan.

Rebel Sabres tells the story of the battle of Brandy Station, in Culpepper County, Virginia, on 9 June 1863. It was the largest cavalry battle of the American Civil War and J.E.B. Stuart's hitherto superior Confederate cavalry were almost defeated. Their confidence, bordering on arrogance, was demonstrated just days before when Stuart held an ostentatious review of his ten thousand troopers, with the enemy only twelve miles away. David Chandler argues that the resultant slight on his reputation was the cause of Stuart embarking on a massive raid which deprived Lee of vital intelligence in the invasion of the North which was thwarted at Gettysburg.

Footage of the 130th Anniversary re-enactment of the battle is seamlessly integrated with specially shot footage of British based Civil War re-enactment groups on Cannock Chase. The booklet consists of excerpts from Baylor's memoirs *Bullrun to Bullrun* written after the Civil War.

Austerlitz and *Rebel Sabres* are available by mail order in the UK (0403-275999), the others exclusively through W.H. Smith stores.

Stephen J. Greenhill

The Penguin Encyclopaedia of Weapons and Military Technology
Kenneth Macksey. Viking; ISBN 0-670-84411-X; 392pp; mono line drawings & maps; bibliography & index; £20.00.

It is rare to find a military reference book about which one can find nothing good to say, but unfortunately in this case it is true. At first glance it appears to live up to its title, but the most cursory further investigation of its contents shows how misleading this is. The omissions are enormous, inaccuracies abound and a great deal of the book is filled with entries which have little or nothing to do with the subject matter of the title.

Did you know, for example, that the flintlock musket was 'standardised' in the 17th century or that the assault rifle did not make an appearance until after 1945? The pike warrants one short paragraph, and the entry correctly says it was revived in the 16th and 17th centuries to reinforce 'vulnerable' musketeers, without saying who they were vulnerable to. There is no separate entry for the crossbow, just passing mention in the entry on 'bows and arrows', and even that inaccurate because it says it was invented circa 1100 AD!

The entry on armoured fighting vehicles is incredibly thin on technical detail, and reading it you would think that the Matilda was the only Anglo-American tank of WWII; there is not a single mention of the Sherman, can you believe... Chobham armour gets a passing mention but no description, nor a separate entry. And when one tries to look up weapon designers, disappointment is immediate; Samuel Cody and Hiram Maxim have entries, as do the Schneider brothers, but you will look in vain for Luger, Mauser, Schmeisser or Walther, for example. However, there are dozens of entries for military commanders who had no influence on military technology of any sort.

Taking another example, there is an entry for machine-guns, but apart from a passing reference under the entry for rifles (and that to the SA80!) no mention of the sub-machine-gun. Even the battles described seem chosen almost at random, and it is pot luck whether you will find any information on what influence a particular weapon or technological innovation had on their outcome. Overall, a poorly conceived and executed book without a single redeeming feature.

On the Napoleonic Wars
Collected Essays by Dr David G. Chandler. Greenhill; ISBN 1-85367-158-4; 270pp; mono maps & sketches; bibliography & index; £17.95.

Published to celebrate David Chandler's 60th birthday and to mark his retirement as Head of the Department of War Studies at Sandhurst, this is a selection of articles, essays and lectures written by the doyen of Napoleonic warfare over the last 30 years.

The subject matter is catholic, ranging from appraisals of individual battles (Marengo, Austerlitz, Sahagun, Borodino) through a comparison of the virtues of line versus column to reassessments of both Napoleon and Wellington, with other chapters on, for example, the Marshalate, the Egyptian Campaign and the Spanish guerrillas.

There is a most readable semi-autobiographical introduction plus introductions to each chapter explaining when and why they were written. The book clearly shows the development of Dr Chandler's military thinking and the clarity of the writing shows why he is one of only two men to be awarded the D.Litt from Oxford since Sir Charles Oman. A fascinating and highly readable book which can be warmly recommended.

Osprey Men-at-Arms series
all 48pp, 8 colour plates, approx 35 mono ills; p/bk, £6.99.

MAA 263: **Mughul India 1504-1761**
David Nicolle, plates by Angus McBride

The usual treatment from this established team, applied to a marvellously colourful subject. Dr Nicolle gives a concise history of the composition, organisation, equipment and tactics of the Mughul age, from Barbur via Akbar and Aurangzib to the final collapse and fragmentation of the 18th century. The high artistic standards of this culture provide many superb subjects for the monochrome pictures, most of which are superbly detailed Mughul miniatures, with the usual mixture of architectural photos, a few museum artefacts and formation diagrams. The colour plates are a feast for an artist like Mr McBride, who takes full advantage of the dazzling possibilities (and yes, there is a war elephant in here!).

MAA 264: **Peter the Great's Army 2: Cavalry**
Angus Konstam, plates by David Rickman.

A companion to MAA 260 on the infantry, this covers Line, Guard and Cossack cavalry, and artillery. As with that volume, this is a most useful concise reference to a subject not over-published in the West. The text gives the essential facts on composition, organisation, equipment, uniforms, and tactical employment, with useful comments on the effectiveness of these troops. There is a helpful chronology from 1709 to 1725, following on from that in MAA 260; and the text is supported by tables of regiments, standards, etc.

The History of the Lancashire Fusiliers 1939-1945
by John Hallam. Alan Sutton; ISBN 0-7509-0409-7; 232pp; 20 maps & diagrams; 26 black and white illustrations.

The Regular, Territorial and Service battalions of the Regiment served in the major theatres of the war, in north-west Europe, the Middle East and the Far East. There were four battalions of the Regiment in the British Expeditionary Force in France and Belgium during the 'phoney' war and the withdrawal from Dunkirk. After reforming in Britain, the 2nd Battalion landed with the First Army in North Africa, and fought through Algeria, Tunisia, Sicily and Italy. The 11th Battalion formed part of the garrison of Malta during the siege, and was then moved to Italy for the latter part of the war there. Three battalions saw service in Burma. The 1st Battalion was involved in the Chindit operation, the 10th Battalion took part in the fighting in the Arakan, and the 1st/8th Battalion was in the advance from Kohima to Mandalay. One battalion, the 2nd/5th, took part in the Normandy fighting after the D-Day landings.

This is a well written, concise account of the Regiment's activities during the Second World War, written by Major John Hallam who served in the Lancashire Fuiliers and the Royal Regiment of Fusiliers until he retired in 1974.

Gathering at Isandlwana

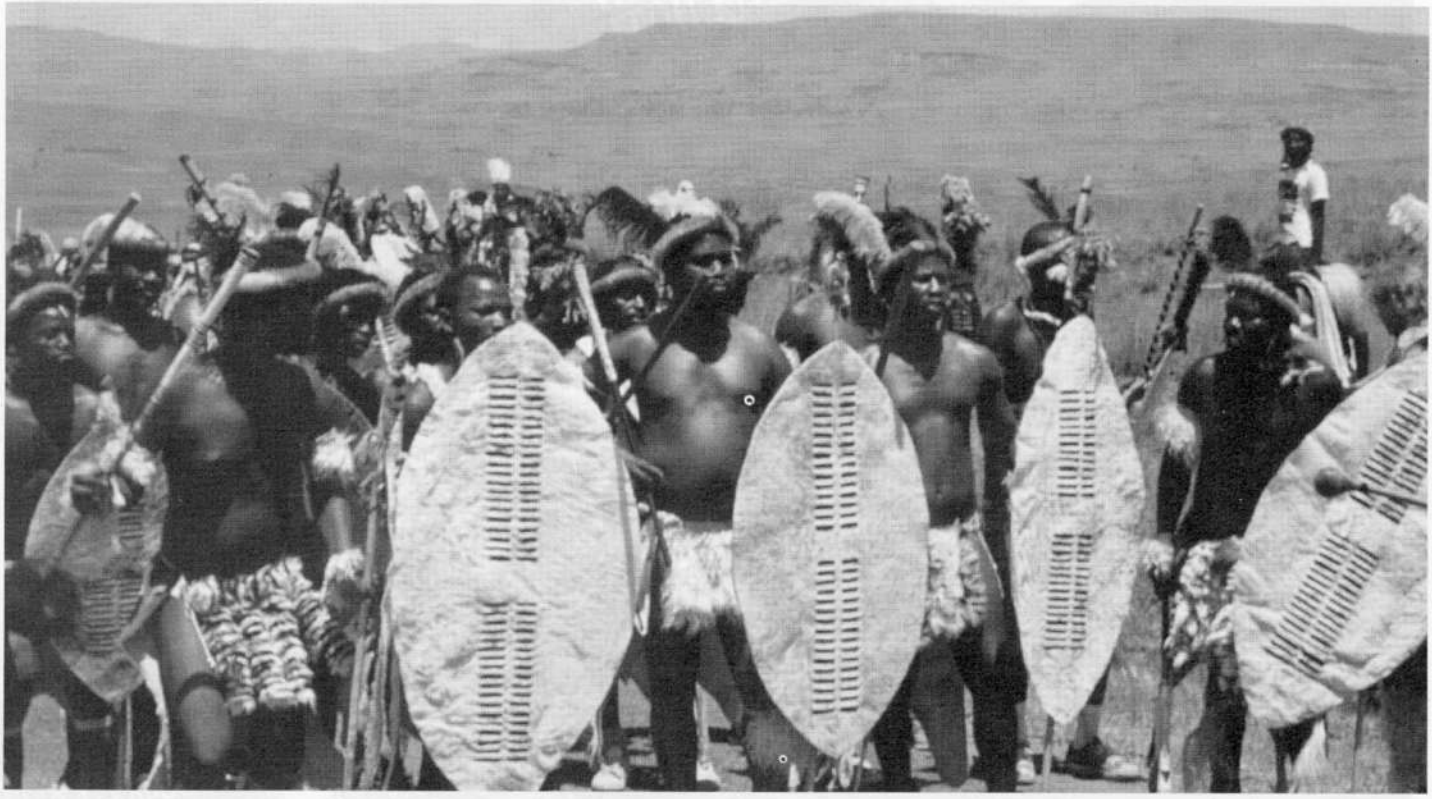
Traditional Zulu War Dress

At Isandlwana today, Zulu warriors gather to draw strength from a past victory. IAN KNIGHT was there and describes their traditional regalia.

For most of the nineteenth century, the Zulu kingdom boasted one of the most sophisticated and powerful armies in southern Africa. The Zulu kingdom had emerged in the 1820s when the original Zulu clan, one of many on the seaboard of south-east Africa sharing a common culture and language, rose up under King Shaka kaSenzangakhona and conquered the surrounding peoples. Under Shaka, many existing elements of Zulu society were developed to new extremes to provide the foundation of the Zulu army. When that army was defeated by the British in the Anglo-Zulu War of 1879 many of its institutions were irrevocably shattered, whilst others were further undermined by the decade of civil war which followed. Thus the Zulu army in its pure form had only a limited life span, but the older traditions from which it emerged have lingered in Zulu society until recent times. Prior to 1879, the Zulu army had been characterised by a regimental system in which the young men of the nation were required to undergo a period of national service; this lasted from their enlistment, at the age of eighteen or nineteen, until they were granted permission to marry and disband, which might not happen until they had reached their mid-thirties. Each regiment, or *ibutho* (pl. *amabutho*), had a distinctive name and ceremonial uniform, and a regimental barracks, or *ikhanda* (pl. *amakhanda*), appointed by the king. When the British overthrew the Zulu king in 1879, defeated his regiments, and destroyed many of the *amakhanda*, the national Zulu army effectively collapsed, although the concept of age-regiments giving service to the Royal House survived in a much modified form into the twentieth century. Zulu men still sometimes attend important gatherings in traditional dress today; although the old age-regiments have died out, the men still refer to themselves by the term *amabutho*, and their costume harkens back to 1879 and beyond.

Warrior demonstrating the use of the Shakan stabbing spear. In close-quarter combat, the spear was used in conjunction with the shield. The warrior would first batter his opponent with his shield, hoping to catch him off-guard, and dragging his shield to one side, then followed the under-arm spear thrust, directed against the left side of the chest and stomach. This weapon is a particularly large example, though it is quite likely that spears this size were common in Shaka's time; by 1879, however, smaller examples were the norm.

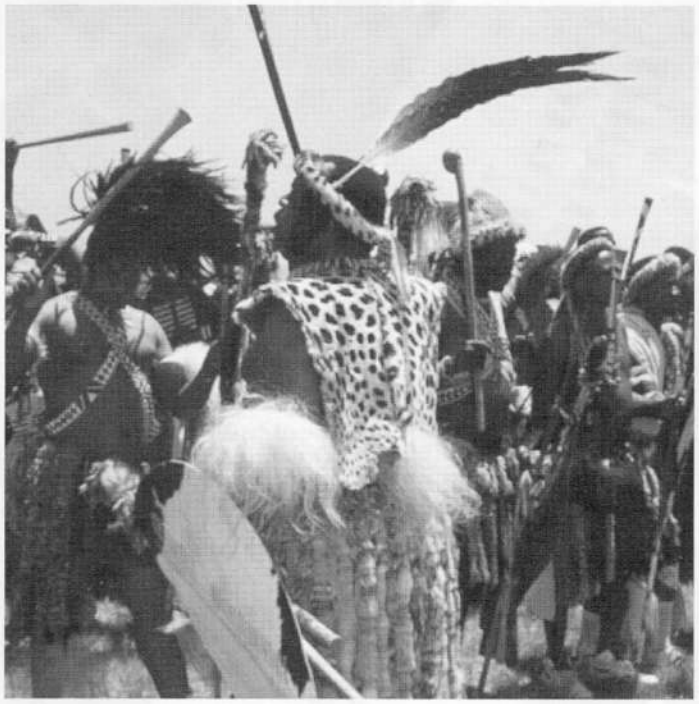
The accompanying photographs were mostly taken at the Isandlwana battlefield in January 1992 and 1993, and they show many of the items of dress which typified the Zulu army on the 1870s. Isandlwana was, of course, a remarkable Zulu victory. On 22nd January 1879, just eleven days into the



The reconstructed uThulwana ibutho, one of the most famous Zulu regiments in 1879. It consisted of mature married men, and a large proportion of men of royal blood. It fought in most of the battles of the Anglo-Zulu War, notably at Rorke's Drift. The uThulwana were famous for their white shields and also wore otter-skin headbands with ostrich feathers attached. The regiment in its reconstructed form consists of a small representative section who take part in modern Zulu ceremonies to represent the old regiments and their glories.

Anglo-Zulu War, the Zulu army caught the British commander-in-chief, Lord Chelmsford, with his forces divided, and over-ran his camp at Isandlwana, killing over 1300 of the camp's 1700 defenders. Chelmsford was forced to withdraw his forces temporarily to the Zulu borders, and for a while his plan of campaign was on the verge of collapse. Ultimately, however, Chelmsford regrouped and the Zulus were defeated in a series of battles which culminated in the destruction of the king's capital at oNdini (Ulundi) in July. In the current troubled state of South Africa, Isandlwana has achieved a symbolic significance among the traditionalist Zulu community who feel themselves threatened by recent political changes, and who draw strength from past victories. The battlefield has therefore seen a number of both commemorative and political gatherings in recent times. For anyone with a sense of history, it is quite an extraordinary spectacle to see several hundred warriors in traditional regalia parading beneath the sombre peak of Isandlwana.

No culture is ever static, however, and a passing century has wrought a number of important changes in costume styles. One major difference has been a shift in the significance of marriage among the Zulu. Prior to 1879, marriage for men was an enormously significant rite of passage, marking the transition from boyhood to the rights and responsibilities of full manhood. This was symbolised by the assumption of the *isicoco*, a ring of fibre woven into the hair on the crown of the head, then plastered with black gum and polished with beeswax. The distinction between unmarried and married *amabutho* was profound in the old Zulu kingdom, since the unmarried men were considered to be the king's first line of defence, whilst the married *amabutho* could be summoned only in time of dire emergency. The headring was therefore an important part of the warriors' appearance, but its use seems to have declined immediately after the war, and today it has entirely been abandoned, even in the most remote rural areas. Furthermore, in 1879 male war-costume consisted solely of natural materials, chiefly animal pelts and feathers. To provide the lavish costumes necessary to dress an army of over 30,000 men required many thousands of furs, and the effect on the wildlife of Zululand was devastating. Even by 1879 there were suggestions that Zulu kings had to trade far and wide for the required materials, and it was becoming increasingly difficult to get hold of them at all. Since then, widespread hunting, modern agricultural methods and human population explosions have all contrived to reduce local wildlife to those areas protected by natural reserves. Although natural items are still highly prized among today's "warriors", and the numbers of men who wear traditional costume, even on special occasions, are tiny by comparison with the old days, it is inevitable that some items are seldom seen. The *sakabuli* bird, for example, is now a protected species, and where once the long glossy black tail feathers which the male sports in the breeding season were a mainstay of the headresses of the young, unmarried warriors, they are virtually unobtainable now. Indeed, the complex costumes worn by warriors at national ceremonies in the old days were so fragile and expensive that even by 1879 they were not worn on campaign; instead the warriors wore a much abbreviated version, consisting of just a few characteristic items. The costume worn at today's gatherings bears a close resemblance to the war dress worn in the field. In particular, the extravagant headresses of the old days have almost entirely been forgotten. In addition, of course, a number of items have simply dropped out of fashion over the years, while others have come in, and the Zulus have no qualms about mixing old and new styles. For a people who no longer go barefoot in their every-day life, it is inevitable that sandals, trainers and shoes are now worn with traditional regalia, while other items have been coloured with modern dyes to make them more attractive, or decorated with modern materials●



Prince Gideon Zulu wearing the sumptuous costume traditionally reserved for men of the highest rank. He wears a collar of leopard skin, which might only be worn by members of either the Zulu Royal House, or of the Chiefs of the various clans incorporated into the kingdom. The long feathers of the Blue Crane in the headdress are also an indication of seniority; today they are only worn by royalty, although in the nineteenth century they were also worn as part of the ceremonial uniforms of the most senior amabutho.

Fine example of warshield showing the construction. Slits are cut into the body of the shield either side of the central axis, and a double strip of hide is threaded through, then folded back to secure the stick at the back. The practice of adding material as padding is a recent one. The spear carried here is typical of the type used for throwing.

U.S. Army

Rough Riders

1st United States Volunteer Cavalry, 1898

Led by soon-to-be President Teddy Roosevelt, the Rough Riders were one of the shortest lived regiments in the U.S. Army, but quickly became internationally renowned. PETER CHURCHILL chronicles their short but flamboyant history.

"Some 200 Rough riders from Arizona are due to arrive here over the Southern Pacific Railroad this morning and will form the nucleus of the regiment of cowboy cavalry which will be organized here during the next several days." (*San Antonio Express* 7th May 1898)

A famous but short-lived regiment was in the making: the 1st United States Volunteer Cavalry, otherwise known as the "Rough Riders", raised specially to fight in the Spanish-American War, and disbanded after 133 days of service. Composed mainly of cowboys, Indians, and other Westerners, the Rough Riders served with distinction in Cuba but their national and lasting fame was largely due to their flamboyant and ebullient commander, Theodore Roosevelt, former Assistant Secretary of the Navy who had resigned from the post in order to become Lieutenant Colonel of the volunteer regiment.

Roosevelt, born in 1858, scion of a wealthy and distinguished New York Family, was an advocate of what he termed the "strenuous life". He had spent some tough years out West in the 1880s as a cattle rancher in Dakota and had a great admiration for the self-reliant cowboy type. "These were the men", he wrote, "who made up the bulk of the regiment and gave it its peculiar character".

"They were a splendid set of men, these Southwesterners," wrote Roosevelt in *The Rough Riders* (1899), "tall and sinewy, with resolute, weather-beaten faces, and eyes that looked a man straight in the face without flinching... there could be no better material for soldiers than that afforded by these grim hunters of the mountains, these wild rough riders of the plains. They were accustomed to handling wild and savage horses, they were accustomed to following the chase with the rifle... almost all had, at one time or another, herded cattle and hunted big game. They were hardened to life in the open, and to shifting for themselves under adverse circumstances."

The *casus belli* of America's fight with Spain was the latter's colonial rule of Cuba. When a revolt against Spanish domination broke out in 1895 American sympathies settled on the Cuban rebels. Exaggerated stories of Spanish atrocities in dealing with the uprising were circulated in the popular US newspapers, in particular the *New York Journal* and the *New York World*, whose inflammatory coverage helped largely to create the public sentiment that led to war.

The war was triggered by the sinking of the US warship Maine on 15 February 1898 while at anchor in Havana Harbour; she had been sent to the island to protect American lives and interests. A mysterious underwater explosion destroyed the ship with a loss of 253 men. It was never properly established who sank the Maine. Were hostile Spaniards responsible? Or Cuban rebels who wished to embroil the US in a war with Spain? A US Naval enquiry was unable to obtain evidence fixing the sinking on any person or persons.

Nevertheless, the American press and bellicose politicians like Theodore Roosevelt

Roosevelt's New York tailor made him a uniform of khaki cotton with yellow collar and shoulder tabs bearing gilt insignia. For comfort he wore a blue polka-dot bandana.

The American success in taking the San Juan heights was partly due to the close-support fire of a Gatling Gun Detachment commanded by Lieutenant John H. Parker. From the painting by H. Charles McBarron.

attributed the disaster to Spanish agents and demanded US intervention in Cuba. War fever gripped the American public and "Remember the Maine" became a popular catchphrase. Spain broke off diplomatic relations on 21 April and the US Congress formally declared war on 25 April 1898, America's stated objective being the liberation of Cuba from the Spanish yoke. A cynical view at the time was that the US had a burning desire to flex its military muscles, and yet the United States was not geared up for a major foreign war. The entire US regular army numbered just over 28,000, while Spanish forces on Cuba alone totalled 230,000. Early in March, Congress appropriated 50 million dollars for the army and navy, enlarged the regular army to nearly 65,000 officers and men, and called for thousands of volunteers to serve to the end of the war.

Theodore Roosevelt was a keen advocate of the war. Aged 40, politically ambitious, physically brave and bursting with energy, it was a splendid opportunity (probably his last chance) to win military glory in the field; indeed, his bespectacled eyes were fixed on winning the Medal of Honor. Roosevelt had already discussed with his friend Leonard Wood, an experienced soldier, the possibility of raising a regiment of mounted riflemen from among the skilled horsemen of the plains. So when Congress authorised recruitment of three volunteer cavalry regiments in the West and Southwest, Roosevelt immediately offered to raise one of them.

He was offered the colonelcy of the first regiment but owing to his lack of military experience he had the good sense to refuse, suggesting that Leonard Wood be made colonel while he served as second in command. Roosevelt's military experience had been limited to three years as a captain in the National Guard, whereas Wood, holder of the Medal of Honor, had served as army surgeon, and later in command of expeditions in the fierce campaigns against the Apaches.

Recruited principally from Arizona, New Mexico, Texas and the Indian Territory (Oklahoma), the 1st US Volunteer Cavalry also included some fifty wealthy sportsmen and collegiates from the east, most of them friends of Roosevelt. This led one reporter to describe the regiment as "the society page, financial column, and Wild West show all wrapped up in one."

The newspapers promptly dubbed the outfit the "Rough Riders"; the public liked the name but the regiment did not. "At first we fought against the use of the term," Roosevelt wrote, "but to no purpose, and when finally the Generals of Division and brigade began to write in formal communications about our regiment as the 'Rough Riders' we adopted the term ourselves."

The regiment assembled at San Antonio, Texas, prior to leaving for embarkation at Tampa, Florida, on 30 May 1898. While Colonel Wood organized and hastily trained the regiment at San Antonio, Roosevelt spent a hectic week in Washington D.C. hurrying up various departments and fixing things with his railroad friends to ensure that his regiment got to Tampa speedily and in good order.

Unprepared for war, the US Army was short on equipment and supplies, sanitary conditions were disgraceful, food tainted, medical service woefully inadequate, and with armouries full of obsolete weapons and ammunition. In the face of such ineptitude Wood and Roosevelt made a good team: the former's practical military experience backed by the latter's badgering influence in high places. another report in the *San Antonio Express* illustrates the point:

"A train of nine stock cars brought in the pack train for the cavalry from St Louis last night. There were 189 powerful army pack mules and three horses on the train. There

were also two carloads of pack saddles... but the saddles are not satisfactory to Col. Wood. They are the new style, and he thinks they are not as suitable as the 'Arapajo' saddles formerly used by the government. He sent a telegram to Lt.-Col. Roosevelt at Washington advising him to secure the Arapajo."

Roosevelt also managed to get his men issued with the new .30in calibre Krag-Jorgensen bolt-action magazine carbine (a Norwegian design) of the regular cavalry; other militia and volunteer units carried the single-shot .45in Springfield Model of 1873. Some of the cowboy Rough Riders were allowed to take their favourite Winchester, the new model which fired the Government cartridge. Regarding the use of the sabre, Roosevelt wrote, "We felt very strongly that it would be... a waste of time to try to train our men to use the sabre — a weapon utterly alien to them; but with the rifle and revolver they were already familiar." Roosevelt himself was armed with a Colt Model 1892 six-shot revolver taken from the sunken *Maine* and presented to him by his brother-in-law Captain W.S. Cowles of the US Navy.

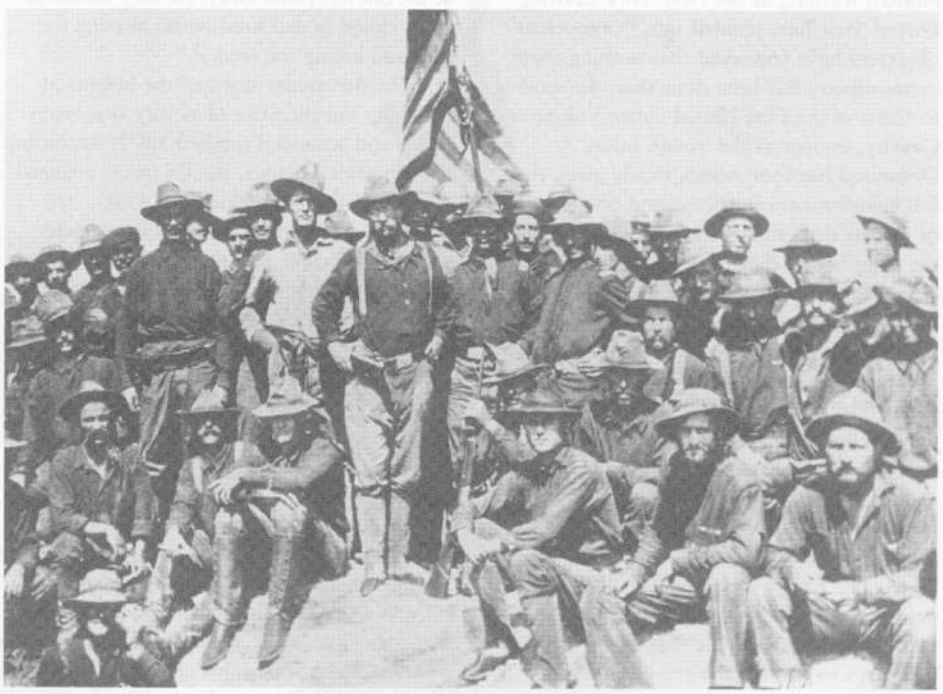
Westerners of all kinds flocked to join the Rough Riders and those fortunate enough to be selected (only one in twenty was accepted) numbered 47 officers and 994 enlisted men. The *San Antonio Express* described the regiment as, "composed of men picked from thousands because of their exceptional skill as riders and their exceptional daring and endurance. They are called 'rough riders' only with reference to their equestrian abilities, for there are no rowdies and no desperadoes among them."

Typical of this Western type was William Owen "Bucky" O'Neill. A former sheriff, later editor of the *Hoof and Horn* cattle journal, he resigned as Mayor of Prescott, Arizona, to become captain of "A" Troop in the Rough Riders. He got his nickname "Bucky" from his fondness of playing faro, or "bucking the tiger" as it was called out West. When he left to join Roosevelt's outfit the entire populace turned out to wish him well and the new mayor made a speech which, reflected the bellicose spirit of the times:

"As you are going into the cavalry branch of the service, captain, the city is desirous of seeing you properly mounted and they wish to present you with another mount. It is not yet fully grown, being only a *Colt*, but we know that in your hands it will become a warhorse of renown. All you need do is take the bridle off every time it bucks and head it towards a Spaniard and you can be sure that one more of the enemy will say 'good morning' to his godfather, the Devil." Thereupon the mayor handed O'Neill a gleaming new colt revolver.

From the Indian Territory came a number of Indians — Cherokees, Chickasaws, Choctaws, and Creeks — some

Roosevelt, second from right in dark shirt, confers with other officers in Cuba. Roosevelt wears a Colt revolver recovered from the sunken battleship Maine, trigger of the Spanish-American War.



Theodore Roosevelt and his Rough Riders on the captured San Juan Hill, Cuba, 1898.

of them pure blood but mostly of mixed breed. Tom Isbell, a half-breed Cherokee, was probably the first Rough Rider to fire a shot in action in Cuba; two minutes later he received the first of seven wounds he suffered in the space of thirty minutes. Up to receiving the last wound, Isbell refused to leave the firing line, then loss of blood forced the brave Indian to the rear.

Roosevelt himself cut a dashing figure in San Antonio. "Mounted on a handsome and spirited bay horse, Theodore Roosevelt drilled the first and second squadrons of the regiment for two hours yesterday afternoon," reported the *San Antonio Express*; "A large crowed collected to witness Col. Roosevelt's horsemanship." On 30 May when the regiment entrained for Tampa, the *Express* noted that, "The Rough Riders presented a very warlike appearance as they strolled about the depot before leaving. Their belts were loaded with ammunition, and their carbines and six-shooters were slung to their belts, ready for action." The regiment soon collected another nickname: "Teddy's Terrors."

Teddy was pleased with his men's appearance. "Their uniform suited them," he commented. "In their slouch hats, blue flannel shirts, brown trousers, leggings and boots, with handkerchiefs knotted loosely around their necks, they looked exactly as a body of cowboy cavalry should look."

Warlike they may have looked, but the regiment was ill-trained in the ways of modern warfare, as the New York *Evening Post* of 18th June pointed out: "Competent observers have remarked that nothing more extraordinary has been done than the sending to Cuba of the First United States Volunteer Cavalry, known as the 'rough riders'. Organized but four weeks, barely given their full complement of officers, and only a week of regular drill, these men have been sent to the front before they have learned the first elements of soldiering and discipline... In addition to all this, like the regular cavalry, they have been sent with only their carbines and revolvers to meet an enemy with long-range rifles." The Spaniards were armed with the excellent German Mauser Model 1893 bolt-action rifle that fired a smokeless cartridge in a five-shot magazine; it proved far superior to the Krag rifle and ended the latter's service with the US military.

At the Tampa embarkation all was confusion. There was no plan of boarding and no staff to direct the movement. It took four days to embark the army of some 17,000, an operation which if properly organised could have been accomplished in eight hours. This was typical of the lack of planning that plagued the US army throughout the war. Because of the shortage of transport ships the Rough Riders had to leave four troops behind, and all the horses of the other ranks; there just wasn't the room. Only the officers' mounts were taken to Cuba.

When the Rough Riders, part of General Shafter's V Corps, landed in Cuba (another chaotic operation) they fought dismounted and first saw action at Las Guasimas, on the road to Santiago; here they lost eight killed and 31 wounded, the latter included the half-breed Cherokee Tom Isbell. Roosevelt was lucky to survive this action: "I was standing behind a large palm with my head out to one side," he explained, "very fortunately; for a bullet passed through the palm, filling my left eye and ear with dust and splinters." Shortly after this fight Colonel Wood took charge of a brigade and Teddy was left in full command of his regiment.

On the 1st July 1898 the Rough Riders were engaged in the celebrated action to take the San Juan heights, a fortified ridge in front of Santiago. General Shafter ordered a frontal attack. This was Roosevelt's "crowded hour" as he called it. On horseback, fully exposed to heavy fire, he led his pedestrian troopers, and various units of other regiments, up Kettle Hill, a height separate from the main ridge. He describes his own turn of combat in *The Rough Riders*: "Lieutenant Davis's first sergeant, Clarence Gould, killed a Spanish soldier with his revolver, just as this Spaniard was aiming at one of my Rough Riders. At about the same time I also shot one... I was... running up at the double. [He had dismounted owing to barbed wire] and two Spaniards leaped from the trenches and fired at us, not ten yards away. As they turned to run I closed in and fired twice, missing the first and killing the second."

The Americans stormed the heights at San Juan but the price of victory was heavy: killed and wounded totalled 1,071. According to Roosevelt's figures, the US forces engaged numbered about 6,600 against 4,500 entrenched Spaniards (other sources state varying figures of 500, 600, 1,200 Spanish defenders). In this action the Rough Riders suffered 15 killed, 73 wounded. Bucky O'Neill was one of the dead. Roosevelt describes his end in *The Rough Riders*:

"The most serious loss that I and the regiment could have suffered befell just before we charged. Bucky O'Neill was strolling up and down in front of his men, smoking a cigarette... He had a theory that an officer ought never to take cover [in front of his men]... As O'Neill moved to and fro, his men begged him to lie down, and one of his sergeants said, 'Captain, a bullet is sure to hit you.' O'Neill took his cigarette out of his mouth, and blowing a cloud of smoke, laughed and said, 'Sergeant, the Spanish bullet isn't made that will kill me.' A little later... as he turned on his heel a bullet struck him in the mouth and came out at the back of his head."

Almost overnight Roosevelt became a national hero (the war was well reported in the field) and his Rough Riders shared the fame; he had won the military glory he had so eagerly sought. He did not, however, receive the coveted Medal of Honor despite the fact that several officers who had witnessed his bravery in the face of the enemy wrote letters to the Adjutant-General recommending that he should get the award.

Two weeks after the successful assault on the San Juan hills the Spanish surrendered Santiago on 17 July. Eight days later other US forces completed the occupation of Spanish-held Puerto Rico. On 12 August a cease-fire was declared and Spain agreed to give up Cuba, which became semi-independent under US protection. The Rough Riders, after suffering much from fever in Cuba, were shipped home in early August 1898; the regiment was disbanded, or mustered out, on 15 September 1898 at Montauk Point, New York, the day the colours were lowered for the last time.

The Rough Riders had developed a great admiration and affection for their brave commander (an admiration equally returned) and on the day before disbandment the cowboy troopers presented Roosevelt with a fine equestrian bronze, *The Bronco-Buster*, by Frederic Remington (who had been in Cuba reporting the war). Roosevelt was deeply moved by the gift and he shook hands with every man to say goodbye. Riding high on his war record, Roosevelt went on to become Governor of New York; elected Vice-President of the United States in 1900 he succeeded the assassinated President McKinley the following year and remained in office till 1909.

Tom Isbell, the Cherokee hero, and some other troopers joined Buffalo Bill's Wild West show and billed as "Roosevelt's Rough Riders," did a regular rendition of the "Battle of San Juan Hill," with Buffalo Bill Cody playing the role of his friend Teddy Roosevelt. It was a spectacular and popular performance.

The remains of Bucky O'Neill were buried at Arlington National Cemetery on 1st May 1899; eight years later an equestrian statue of O'Neill, by Solon Borglum, was dedicated to his memory and stands in the Plaza at Prescott, Arizona. This vigorous monument, depicting O'Neill as the very spirit of the Rough Riders, was chosen as the design for the US three-cent stamp of 1948, commemorating the 50th anniversary of the raising of Roosevelt's Rough Riders●

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Shark-tooth Crusaders

Warriors from the South Seas War of 1881

In the first of a series detailing extraordinary warriors and strange campaigns, L.F. WILDMAN describes a religious war fought on the island of Tabiteuea in the Pacific Ocean.

The Gilberts archipelago consists of sixteen islands scattered across the equator in the Pacific Ocean, south west of Hawaii, north of Fiji. Essentially low lying coral atolls — a strip of land covered with coconut palms, surrounded by a belt of reef with a lagoon — they are the ideal South Sea Islands. Robert Louis Stevenson visited the islands for his book *In the South Seas* and many European traders scouring the ocean for deposits of guano (rich in valuable phosphates) paused there to enjoy its paradise of transparent lagoons, soft sandy beaches and cool sea breezes. In the middle of the 20th century, Tarawa Atoll was the scene of some of the bloodiest fighting between the Japanese and Americans in the Second World War. Today, the islands are part of a larger confederation called the Republic of Kiribati. The native people of the Gilbert Islands are called Micronesians, being descended from ancient waves of migration that brought them from Samoa and ultimately south east Asia.

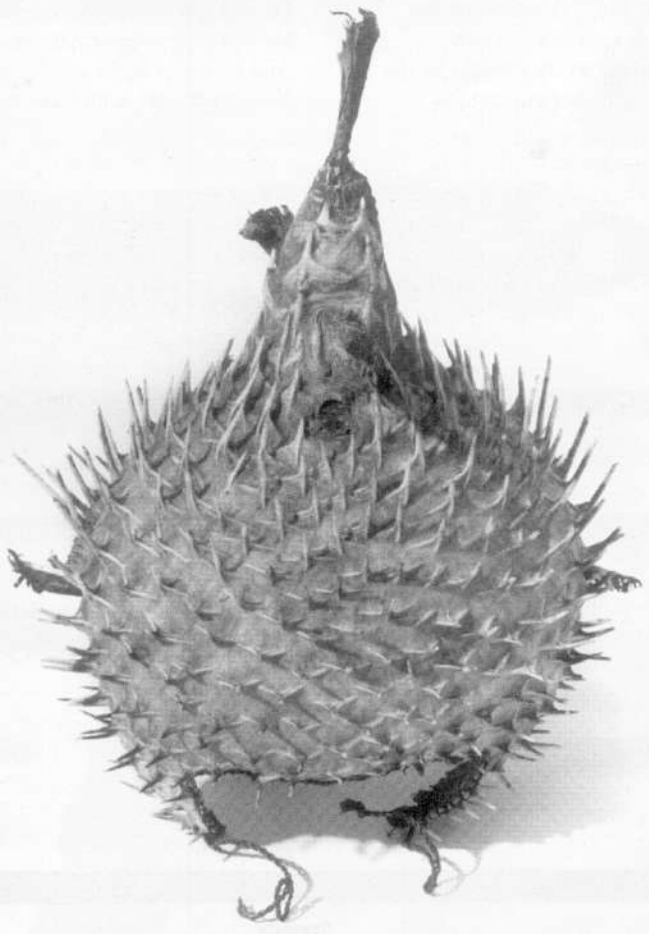
Before the arrival of the Europeans in the 19th century, Gilbert Islanders fought wars over land and status. A man aggrieved over something stolen or a man seeking to reinforce his claim to be *uea*, or tribal head, would muster men of his family and friends and fight a very limited combat against his opponents in which few men would actually die and the conflict largely took a ritualistic form. This changed with the arrival of the first white man. Traders sold the natives guns and outside politics and concerns propelled the Gilbertese towards mass warfare in which whole communities took to arms. That said, the islanders had already devised the weapons and armour that rank them among the most extraordinarily clad warriors in the history of warfare.

Gilbertese weapons were simple but intended to strike fear. They adapted the most frightening elements of the natural world around them and strapped them to swords and spears. The serrated teeth of sharks were studded into swords two and a half feet long and palm-wood spears that were used like polearms and pikes. The idea was to tear the flesh and leave fragments of the sharks' teeth in the wound to cause infection. A similar concept for use against naked flesh was a spear four to five feet long to which the poisonous barbs of the stingray fish were attached and these were burned so as to be more likely to break off in a wound.

Apparently to ward off blows from this, three or four pieces of wood were attached to spears to form a kind of trident which might trap an opponent's blade. Other weapons included clubs and a lasso weighted with a lump of wood which was thrown around the enemies legs to trip them up and bring them down. The bow was unknown among islanders before the arrival of the Europeans when they quickly adopted any firearms they could lay their hands on.

Even more impressive than their shark tooth weapons were the suits of armour worn by the most senior and richest Gilbertese warriors. These were made entirely of coconut fibre which was woven into a thick mail that protected their legs, arms, and body. To this might be added a breastplate made out of strips of dried ray fish skin. On their heads they wore coconut fibre skullcaps over which was placed a helmet made out of the dried spikey skin of an inflated puffer or porcupine fish. To the back of the body armour might be attached a shield of coconut fibre to protect the back of their heads from stones and other thrown weapons. Equipped like this, the Gilbertese "knights" were ready to take on anyone, including the Europeans. The power that overwhelmed them and pushed them towards the biggest war in their islands history did not come, however, from passing merchant or naval ships, but from Christian preachers.

In 1868, two native Hawaiian pastors,



Fish skin helmet derived from inflated puffer or porcupine fish.

called Kapu and Nalimu, arrived with the Rev. Hiram Bingham from the American Board of Commissioners for Foreign Missions. They set up camp on the island of Tabiteuea, a long thin strip of land running north to south with the lagoon on its west side. Converting two villages in the north — Eita and Utiroa — the Rev. Bingham was happy with the work of his Hawaiian ministers and left them on Tabiteuea while he set sail for another island to concentrate on translating the bible into the native language. Left alone among the people of northern Tabiteuea, the two Hawaiian missionaries grew impatient with the slow progress of their advance down the island. Kapu and Nalimu began to spread the word that if the natives accepted their religion they would be invulnerable against the southern pagans in any war of conquest.

To prove their point and to demonstrate their talent as war leaders, Kapu and Nalimu instructed their already converted tribesmen to attack and then feign a retreat against their musket-armed neighbours. Running away before the volley of European gunfire, the Christian tribesmen turned back and charged the unbelievers before they could reload. As a result of this tactical victory, the reputation of the missionaries grew and the conversion of all the northern villages followed. There was a long tradition of personal freedom among the islanders of Tabiteuea and the people of the south were not so easily impressed, particularly as they would be the ones to lose out in any war of conquest.

At first, Kapu, who took it upon himself to organise the southern campaign, travelled with a few Christian converts from Eita and Utiroa to speak to the villagers of Tewai in the south. The people of Tewai refused to listen to them and tried to murder them on the beach. This was all Kapu needed to ignite the great religious war of 1881. The people of the south had insulted the Christians of the north and Kapu would lead them in a war of righteous retribution.

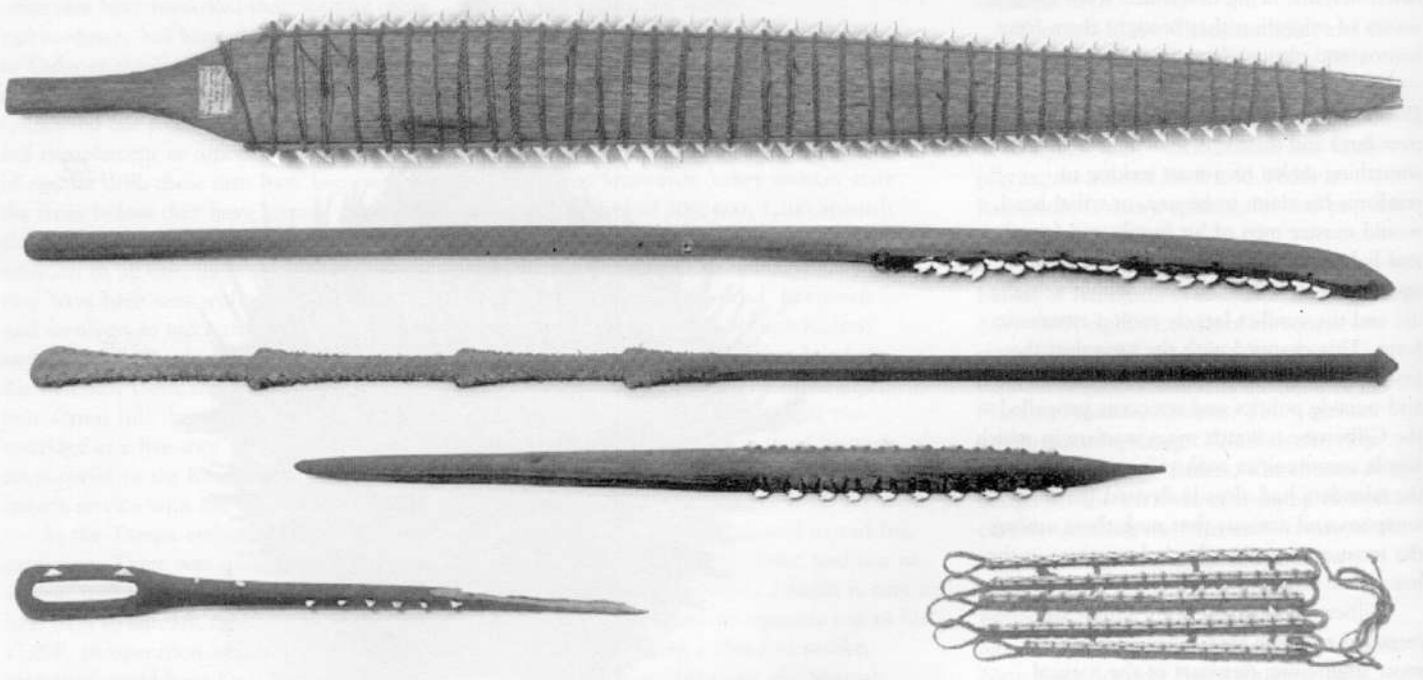
At his headquarters in Eita, Kapu and his leading Christian converts declared that in the forthcoming war only those who accepted the true faith would be spared. No mercy would be shown even to relatives of those northerners living in the south and everyone of fighting age should join the northern army. If anyone disobeyed this, Kapu insisted, they would either be killed or have their lands taken away from them. Everyone in the north joined the Christian army. Wearing a European jacket and trousers, Kapu led his troops southwards, appointing leaders from the elders of each tribal village he passed through. He even taught them a fighting song: "Tai matemate ngkami ba bon raomi Iesu".

"Oh, do not be discouraged,
For Jesus is your friend.
Oh, do not be discouraged,
For Jesus is your friend.
He will give you grace to conquer,
He will give you grace to conquer,
And keep you in the end."

Young warriors from Kapu's army led raids at night on tribesmen living on the islets of Tenaumariki, Tengongo, and others. When asked where they had been at night, the warriors replied they were collecting octopuses. Most of the villagers from Tengongo and Tenaumariki were massacred and the survivors escaped by swimming across the shallow water to Tewai, the stronghold of southern opposition.

Hearing word of the advancing Christian army, the tribesmen of Tewai called upon all the other villages of southern Tabiteuea and soon an army was formed among their palm-wood houses and sand castle bastions. Armed like the northerners with their traditional weapons of shark-toothed swords and spears, the southerners also possessed a handful of muskets and one old rusty cannon they had salvaged from an American ship that had run aground on their beaches, but overall they were smaller in numbers.

Kapu decided that the best times was to attack at low tide when he could arrange his men in a long line running west to east with his most loyal and populous followers from the villages of Eita and Utiroa crowded in the middle and the other less tested, less heavily populated northern villages on his wings. The southern tribesmen placed their cannon in the centre of their army and immediately cut down one of the northerners but word spread quickly among the Christians that this man had made pagan prayers the night before and was an unbeliever anyway. Shark-tooth swords and spears clattered against each other with the coconut armoured "knights"



Above
Weapons studded with sharks' teeth, from the Gilbert Islands. At the top is a Shark-tooth sword, two feet six inches long.

Opposite
Richard Hook's reconstruction of a Mironesian Warrior from the Gilbert Islands around 1881 shows a full suit of coconut fibre armour, spikey puffer fish helmet, and a sharks' teeth studded spear.

in the thick of it. A heavy rainfall put the cannon and muskets out of action and the Christians kept up their spirits in the hand to hand fighting by singing their battle hymn.

Smaller in number, the southern villagers had thrown their best and most heavily armed warriors at the centre of Kapu's army. With elemental military skill, Kapu urged the warriors on his wings to encircle the smaller force. Attacked from front and sides, the southerners were soon crowded in such a tight bunch it was said they could not fully raise their weapons. One tribal legend recounts that the fighting grew so fierce at this point that a giant soldier among the southerners was set upon by Christians who were forced to cut steps into his body before they could chop off his head. Folklore aside, exhaustion had by now overcome the southern troops and the northerners closed in, turning the defeat into a massacre. Tribal elders asked that the defeated warriors be spared with their families, but Kapu, hand on bible, shouted: "No mercy for the heathens. Death to God's enemies. Sing your hymn."

To escape the northern spears, men clambered over dead bodies and even women and children were caught in the frenzy. "Anything that moved was skewered," recounts Sabatier, a leading historian of the Gilbert Islands. "They dragged out by the feet those pretending to be dead and smashed their heads in." By midday, the fighting was virtually at an end, but to be sure that everyone lying on the ground was dead, the northern warriors dragged the palm frond roofs of huts from the nearby village and piled them over the bodies on the beach, setting fire to it so that more screams were said to be heard from those burned alive. Such was the ferocity of this battle, unparalleled in the island's history, that the area of the combat was forever after known as "the place of the smell of blood". A thousand tribespeople are estimated to have died on that day. As a result of this victory, the northerners took over all the lands of the southern villages and Kapu and Nalimu ruled like kings, setting up laws and organising police in the villages.

Despite attempts at rebellion, this state of suppression continued until 1892 when a British Protectorate was established over the Gilbert Islands and the British tried to return some of the stolen lands to the inhabitants of southern Tabiteuea. Kapu by this time had resigned his position as missionary and was operating as trader, but the British conducted an investigation into the war which ten years later was still causing much misery and Kapu was eventually deported. Since then the people of north and south Tabiteuea have lived in peace●

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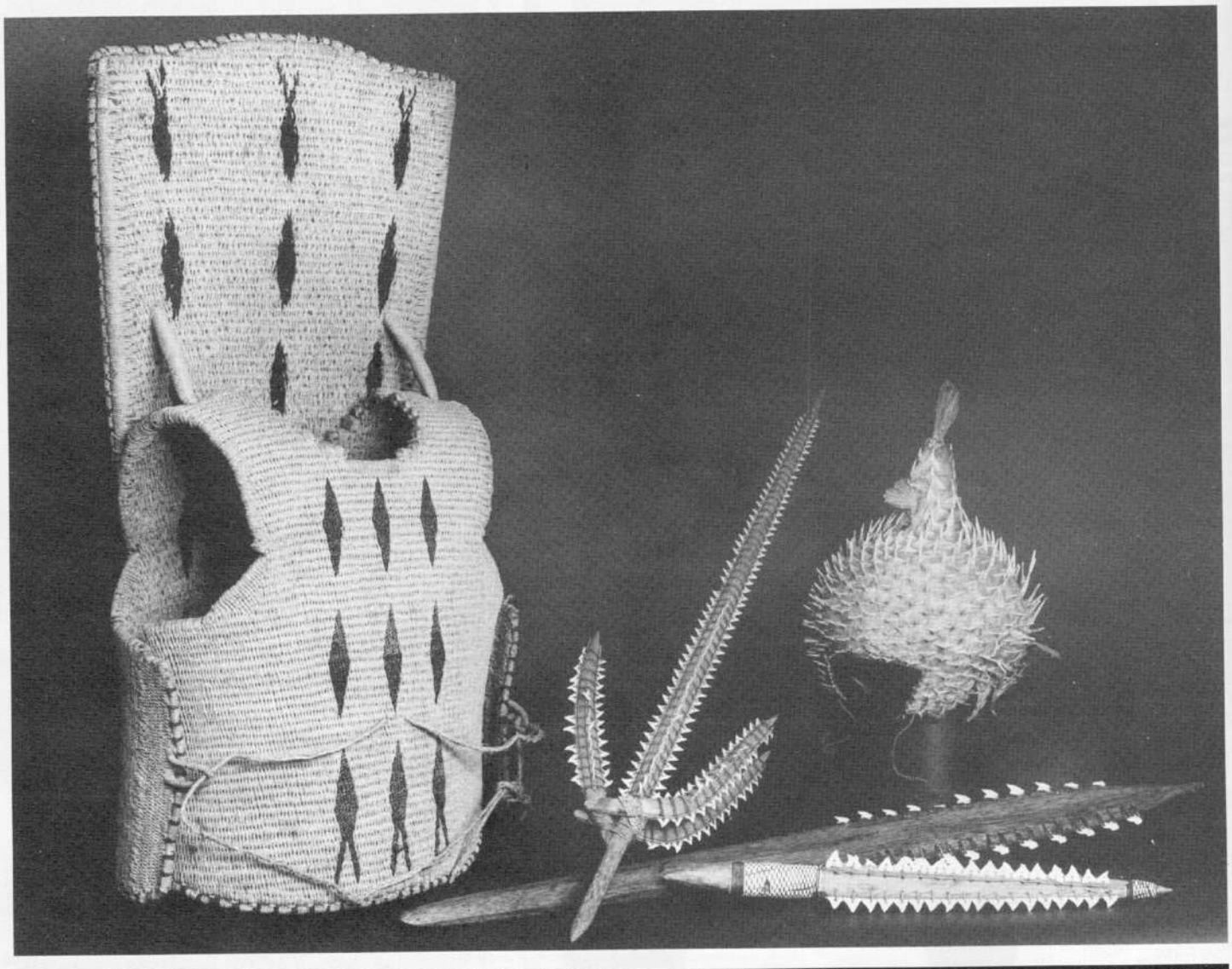

Coconut fibre armour, fish skin helmet, and shark tooth harpoons from the Gilbert Islands.

British Army

Combat Soldier, 1995

New Combat Uniform

For the first time in its history, the British Army is being equipped with a combat uniform which will provide the individual soldier with all the necessary clothing to meet any crisis. Known as *Combat Soldier 1995*, JOHN NORRIS describes the new uniform which will be issued as standard to all personnel in the British Army.

In the past it has been the policy of the British Army to issue clothing appropriate to a specific zone of operation just prior to actual deployment. Thus, mountain and arctic warfare clothing, which is bulky, is signed out by the troops just before going to Norway. The same principle applies to desert and jungle uniform, which is more lightweight. After the deployment, troops sign the various items of kit back into the clothing stores and return once more to wearing standard uniform. The new range will simplify the procedure of issuing kit to the new recruits at their depots and make life easier during kit checks in the battalion. It will also eliminate the time consuming practice of signing various items of uniform in and out of the clothing stores. In effect, Combat Soldier 1995 (CS95) will provide every single soldier in the British Army with a systems approach of layered clothing, giving the individual the ability to wear whatever item is seen fit to suit his working conditions, the weather and climate, and his job of work. There are several items of clothing on standard issue in the CS95 range which should, in theory, be enough to allow each soldier to serve in any region of the world without having to draw specialised items of clothing. This includes deployment in zones of extreme tropical heat and desert, through to the more temperate climates down to sub-zero conditions.

The CS95 range is not just an idea for standardising army combat clothing. It has been devised in response to the increasing demands the United Nations place on the army, which are often out-of-area operations. These roles demand that soldiers can be moved to any operational zone in the world at a moments notice, and CS95 will mean troops avoid wasting time drawing specialised clothing. With everyone equipped the same it will just be a case of packing bags and going.

The trouble with drawing specialised clothing was highlighted during the Falklands War in 1982. Following a training exercise, prior to deployment, 5 Brigade had 2000 sets of arctic trousers issued to them, but only 1000 arctic smocks. When the same unit pressed for rubber overboots to be issued to keep their feet dry, the Ministry of Defence replied that these items were obsolete and not on issue. When asked for bergens, the Ministry of Defence said none were available, then changed its bureaucratic mind and stated 80 sets were available. Indeed, the full extent of the inadequacies in clothing issues to the troops were only sorted out after the timely, but unofficial, intervention of a Guard's officer's father in the House of Lords raising the matter. As is well known the troops engaged in the Falklands campaign suffered many hardships not experienced by troops since the First World War. These included trench foot, foot rot, and frost bite, which lowered the combat efficiency of a number of troops. The new CS95 range has been designed to prevent such a debacle from happening again through the simple expedient of issuing identical clothing to all soldiers. Already some 2000 sets of CS95 have been distributed to twelve units in Germany and Britain. This makes it the largest clothing trial of its type ever conducted by the British Army. The units chosen to participate in the trials were selected on the basis that they operate in areas where the climate is less than conducive to normal wear. It is hoped that the trials will be successfully concluded in July 1994 and any defects ironed out.

While the CS95 range is designed to keep the soldier dry and warm in one go, the British Army is not the first to come up with the idea. In the First World War, the Japanese Army fighting alongside the Allies, issued their troops with greatcoats and mackintoshes. This was a unique move by any army at the time and did serve to keep the troops dry and warm. Eighty years later textiles have improved to the extent that it is possible to provide a soldier with both comforts in the field and reduce the effects of the wind chill factor.

The new combat assault boots are lightweight items of footwear with shock absorbing soles and a speed loop lacing facility. Feet suffer badly in combat and boots are notorious to put on after removal and the soldier has rested for a while. The new sole will go some way to reducing the strain on feet and speed lacing facility will aid the soldier in replacing his boots. To compliment these facilities the CS95 range includes a special *moisture vapour permeable* (MVP) boot liner for waterproofing, reducing the incidence of foot rot and other ailments. When necessary newly developed gaiters can be worn over the boots to further reduce the intake of dirt and water. These rather antiquated looking items are manufactured from cotton canvas and secured in place by wire and rubber straps. Experience in extremely muddy and snowbound conditions have shown that such items are useful and their widespread issue can only make the soldiers life in the field that much easier.

Protection of a soldier's hands has also come under attention. The new gloves in the CS95 range are manufactured from leather, which is considered by experts to still be the most hard wearing material, has good insulation properties and allows the wearer's hands to breathe. There are two types of liner for use with the new style gloves. The first is an MVP liner for waterproofing, the same as with the new combat boots. The second liner is manufactured from Nomex flame retardant material, which can be worn separately from the other hand coverings. The fingers of this liner are fitted with small rubber studs to allow the wearer to manipulate items with some dexterity. With a soldier's hands dry and warm with a high level of manual dexterity, he can operate most if not all items of weaponry and communications equipment under even the most hostile of conditions.

The new tank suit in the CS95 range will, presumably, be on standard issue to all crew members of armoured fighting vehicles, AFVs, including tanks, armoured personnel carriers and reconnaissance vehicles such as *Fox* and *Scimitar*. This item is manufactured as a one piece suit and is based on a design used on flying suits of pilots. The real thing is manufactured from flame resistant material, but the training garment is made from polyester cotton. This is presumably to prevent the real garment from becoming soiled with grease and oil during training and maintenance exercises. The real flame resistant tank suit is fitted with a special defacation flap to allow the wearer to relieve himself without having to disrobe. Burns to the body when a vehicle is hit is only to be expected, but with a flame resistant suit this type of injury can be reduced. After all, if it's good enough for pilots its good enough for

tank crews. The suit has amply sized pockets on the thigh and ankle to allow storage of items such as compass, pocket knife and field dressing. Fires in AFVs are greatly feared, and the survival rates of the crews must be vastly improved with the introduction of such a suit.

The infantryman's basic uniform in the field is his combat suit and in the CS95 range a new Lightweight Combat Suit has been introduced. This system is made up from a number of items which are manufactured from a core spun 70/30 mixture of cotton polyester. The trousers are based on the standard design in current use in the Far East, which means they are amply fitted with voluminous pocket space for storing maps and other items. They are manufactured in *disruptive pattern material* (DPM) for camouflage purposes. The shirt is also of DPM material and based on the same Far East design in current use and can be worn either as a separate item or with a tee shirt under it in the summer months. Should the wearer feel the cold he can put on a Norwegian Army style shirt, with the currently issued British Army longjohns and long sleeve vest. Being attired in this manner, outer layers can be added, according to the temperature and weather conditions.

The basic over garment in the CS95 range is the outer layer, which is essentially the field or combat jacket. It is manufactured from a lightweight cotton gaberdine material, which is hard wearing and reduces wind chill factor. It is known as a mid-thigh garment which means it reaches down to the wearer's thigh and will not ride up when running or climbing. It is fixed with two-way zippers, a nylon rip stop and large storm proof pockets for the storage of maps, compasses and other essential items. It delivers a high degree of protection to the wearer and is comfortable at the same time. It too is manufactured in DPM camouflage to conform with other items in the CS95 range.

Finally, and perhaps most importantly in the CS95 Range, are the two types of over garment. First is the thermal layer, which is, something the British Army has lacked for a long time. This new item will redress that problem by providing a warm layer to wear when the soldier is operating in areas of extreme cold. Likewise, he can wear it at his own discretion when lying prone for prolonged periods of inactivity, such as on border watch in covert observations posts in

Northern Ireland. The thermal layer is manufactured from a polyester fleece pile with hand warmers. Being made from synthetic materials the garment will not readily absorb moisture. It will not become sodden and a problem for the soldier to dry. The last garment in the CS95 Range is the waterproof layer. This layer comprises of trousers and top and is manufactured from lightweight permeable material which allows it to be easily stashed in a backpack when not needed. The jacket has a hood attached which can be rolled up and stowed in the collar. Unfortunately the trousers are not fitted with either pockets or fly zipper. Presumably the designers believe the wearer will have everything he needs stowed either in his combat trousers or webbing equipment. As for lack of fly zipper, with an elasticated wasteband the wearer only has to slip them down and relieve himself. The material from which the waterproof garments are manufactured is moisture vapour permeable membrane, laminated between two layers of knitted nylon, that is, a Goretex-type material which allows the wearer to perspire, but prevent rain seeping in. As a result, the wearer does not become soaked in his own sweat. When worn together the thermal layer and waterpoof layer will keep a soldier dry and warm.

The proof of any new item entering service with the British Army, or any army for that matter, lies in its wearing and usage.

At present, CS95 has been used on exercise in Europe and the Mediterranean and first reports are favourable. If this continues, soldiers of the British army will be able to be deployed with ease to various zones of operations such as Bosnia, the Falklands and Europe with the same clothing. Also, they will be able to use it when deployed to more favourable zones such as Australia for training exercises and missions in African countries such as Kenya. When the CS95 Range comes into full scale issue with the British Army it will finally mean soldiers will no longer have to unofficially buy warm and waterproof clothing out of their own pockets●

Left
Full range of CS95 uniform worn by 81mm mortar crew in standard Disruptive Pattern Material camouflage.

Right
Two possible working orders of CS95 uniform. Soldier on the right wears the lightweight shirt and trousers with Norwegian shirt. Soldier on the left wears combat jacket with normal shirt.

Top left
Norwegian Army-style shirt with zippered front and elasticated sleeves. Gaiters are also shown for protecting the ankles.

Top right
Thermal layer jacket on left with zipper fastening and elasticated cuffs. Combat jacket on right with zippered front and buttons on all pockets. Gloves in centre.

'Red Patch' in Italy

The 1st Canadian Infantry Division, 1943

Following the fall of Agira, it was not long before the campaign in Sicily was over. Then came the attack on the mainland, during which the Canadians fought as part of the Eighth Army from Potenza to Ortona. JACK L. SUMMERS chronicles their advance into Italy.

Time out: the section Bren gunner takes a break as he removes his gear, carefully sets down his Bren and has a drink of water under the searing sun. The handkerchief over the forehead gave some protection from the blistering steel helmet.

Catenanuova Bridgehead – 29-30 July

On 27 July orders were given for a two-division assault on Adrano. On the left, 1st Canadian Division pushed down the Salso valley through Regalbuto. Preliminary to these operations was the capture of a bridgehead at Catenanuova by 3rd Canadian Brigade on the night of 29-30 July. The attack opened at 23:36 hours, 29 July, and the bridgehead was established by 03:00 hours, 30 July.

3rd Brigade in the Dittaino Valley

While 1st and 2nd Brigades fought along Highway 121 to Agira, 3rd Brigade followed a parallel course down the Dittaino Valley to Catenanuova. The task assigned to 3rd Brigade was to patrol eastward until the battle for Agira was finished. After the fall of Agira, General Simonds assigned 231 (Malta) Brigade the task of leading the advance eastward and down Highway 121, through Regalbuto, and seizing the bridge over the River Salso.

On the afternoon of 1 August, General Simonds gave fresh orders. 1st Canadian Brigade, in a right flanking movement, was to take Tower Hill from the east while 2nd Brigade was to flank left to the high ground between the Salso and Troina. By 04:00 hours, 2 August, a patrol from the 48th Highlanders entered Regalbuto and found it empty. The Hastings and Prince Edward were ordered to take the final objective and by 20:00 hours were in firm possession of the feature; the last strongpoint on the way to Adrano had fallen.

North of the Salso, 2-5 August

The Canadian advance now swung north of Highway 121. A line of hills including Hill 736, Mount Revisotto, and Mount Seggio which dominated the valley east of Regalbuto had to be denied to the enemy.

On the afternoon of 1 August, the Edmontons assembled to attack Hill 763 but were delayed because the mule train carrying the MMG's of the Support Group was held up. At 20:00 hours, 3 August, the Seaforth Highlanders of Canada were ordered to take the lead with the objective Hill 763. By mid-morning on 4 August the entire feature was in the hands of the Seaforths. The operation was completed when the PPCLI crossed the Troina at 19:30 hours and secured a bridgehead on the east side of the river.

Booth Force

On the evening of 4 August, General Simonds issued orders for an infantry cum-tank attack through the Troina bridgehead to link up with 78th Division. The force, consisting of the Three Rivers Regiment, The Seaforths, a battery of SP artillery, an anti-tank troop and a squadron of the 4th Recce Regiment, was under the command of Lieutenant Colonel Booth, CO of the Three Rivers (tank) Regiment.

Using the Troina crossing as the start line, Booth Force was to strike east between the Salso river and Troina road, swing north of Carcaci and occupy the high ground on the west bank of the Simeto. Booth Force crossed the start line at 08:00 hours, 5 August, and by mid-afternoon was firmly in control of the objective.

After this successful operation, 1st Canadian Division turned to the occupation of Mount Revisotto and Mount Seggio. The Edmontons were assigned to Mount Revisotto and the Patricias to Mount Seggio. Both of these units attacked on the morning of 6 August only to find the enemy had withdrawn. With this operation, the Canadians finished their fighting in Sicily.

Sicily was the first occasion on which Canadian troops in large numbers were committed to a lengthy campaign. The division was able to gain battle experience under almost ideal conditions. However, the campaign was not an easy one. The climate and terrain presented exceptional difficulties and the Canadians were thrust into a more active role than had been originally planned for them. They had marched further than any other division in 8th Army and for more than a fortnight had shouldered a large share of the fighting on the Army front. The effectiveness of the opposition at the time was measured by Canadian casualty figures. It was a fine performance by a 'green' division.

Perhaps the highlight of the respite period was the Seaforth Reunion held in Catania on 25 August. On this occasion four battalions of the regiment, the 2nd, 5th and 6th Battalions of the British Army, and the Seaforth Highlanders of Canada in a kilted phalanx 'Beat Retreat' across the Catania Stadium.

Italy

Strange as it seems, little thought was given in the initial planning to what should happen after the fall of Sicily. It was thought that by that time Mussolini would have fallen and Italy eliminated from the war. In fact, the two operations were looked at quite differently. Sicily was considered the last phase of the North African campaign with Italy the first phase of the NW European campaign.[1]

While the 'Husky' operations could not be ignored, they were not considered a major part of the planning process. 'The final report to the President and the Prime Minister contained the resolution by the Combined Chiefs of Staff that the Allied Commander-in-Chief, North Africa, will be instructed as a matter of urgency to plan such operations in exploitation of "Husky" as are best calculated to eliminate Italy from the War and to contain the maximum number of German forces.'

The Italian Plan called for Eighth Army with XIII Corps consisting of 1st Canadian Infantry Division, 5th British Infantry Division and 1st Canadian Army Tank Brigade, to be in the lead on Operation 'Baytown'. This consisted of short jumps across the Straits of Messina to the toe of Italy with the object of opening up the Straits to Allied Naval forces.

The main attack, Operation 'Avalanche', was to follow a few days later further north and simultaneously with the announcement of Italy's surrender carried out by Lieutenant General Mark Clark's Fifth US Army, of one US Corps and one British Corps. It was to be an assault in the Gulf of Salerno south of Naples with the object of capturing Naples and following up with an advance on Rome. At the same time as these two attacks, the 1st British Airborne Division was to land from the sea in the Taranto area and seize the heel of Italy.

Baytown

D-Day for Operation 'Baytown' was 3 September 1943, the 4th Anniversary of Britain's Declaration of War. The assault of XIII British Corps was delivered by 1st Canadian Infantry Division on the right, with 3rd Brigade, Carleton and York Regiment and West Nova Scotia Regiment leading, to the objective of the town of Reggio di Calabria.

Before the evening of D-Day, units of 1st Brigade pushed beyond the 3rd Brigade objectives into the mountainous interior of the Aspromonte heights. Though difficult and arduous, this phase of the campaign was not particularly hazardous for the Canadians. The rugged Calabrian peninsula is the highest in the Apennine system. The Canadian battalions struggled forward in September rains along poor mountain roads in the face of German rearguards. The frosty nights were an uncomfortable contrast to Sicily where only a few weeks before the Canadians campaigned in tropical heat.

By 10 September, advanced patrols of Canadians were in Catanzaro 75 miles as the crow flies from Reggio.

Salerno

On 9 September, the US Fifth Army under Mark Clark launched operation 'Avalanche', the assault on the beaches of Salerno. While many considered the announcement of the surrender of Italy would result in a simple 'walk-in' of the force, 'Avalanche' developed into one of the fiercest battles of the entire Italian campaign. The town of Salerno was secured on 10 September but German counter-attacks over the next three days stabilised the front into a shallow beachhead, and allied hopes of reaching Naples by the end of D+3 vanished.

Potenza, 17-20 September

It soon became clear that the most useful form of assistance which Eighth Army could give to Fifth Army was a rapid advance to threaten the rear of the German counter-attack. Thus, Simonds, with 1st Canadian Division, was ordered to seize Potenza 55 miles east of Salerno and the same distance from Taranto. Attacking early on 20 September, the infantry crossed into the railway yards to engage the paratroopers defending Potenza. By noon, a troop of Calgary Tanks entered Potenza and enemy resistance collapsed. Early in the afternoon of 21 September, 2nd Canadian Infantry Brigade moved through Potenza to contact 5th British Division and later in the day the two allied armies formed an unbroken front from Bari to Salerno.

Foggia-Naples, 21-30 September

From 21-30 September the dispositions of Eighth Army were altered to meet its probable role in the Rome operations. No substantial changes were required in the position of 1st Canadian Infantry Division. 1st Canadian Brigade, operating eastwards, joined with the British Airborne Division in the Taranto region and patrolled far to the north and north-west; from Potenza, 3rd Canadian Brigade sent long-range patrols north-east to Spinazolla, while 2nd Canadian Brigade prepared to open Highway 93 north to Melfi. Throughout this period. Foggia airfield was secured and opened 26-27 September, and Naples was occupied on 10 October by 7th British Armoured Division.

A platoon of Canadian Highlanders moving inland are led by their piper.

Major changes in command of 1st Canadian Division occurred on 22 September when General Simonds took sick and was evacuated on 29 September to be replaced by Brigadier Volkes as A/Commander, 1st Canadian Division, who in turn was replaced as Commander, 2nd Canadian Infantry Brigade, by Lieutenant Colonel B.M. Hoffmeister, CO of Seaforth Highlanders of Canada. These acting appointments soon were converted to permanent ranks and appointments.

Campobasso and Termole

The main body of 1st Canadian Division moved from Potenza at the end of September, and concentrated with the 1st Canadian Brigade near Foggia. At Motta Montecoriena 1st Brigade bumped into the German 1st Parachute Division and after fighting all the night of 1-2 October, established itself and pushed on to Volturara. From here 3rd Brigade pushed on and took Gambelisa on 8 October.

26 MI/70 1st Canadian Infantry Division, 1943

Ronald Volstad's reconstructions show infantry of 1st Canadian Division during the Italian campaign, September-December 1943.
Left
The officer of the Hastings and Prince Edward Regiment wears his tropical drill jacket outside his long duck trousers, with ammunition, boots and short puttees. He carries a .45 Thompson sub-machine-gun. His web equipment consists of waistbelt, braces, cartridge carrier 20-round or basic pouches for ammunitions carriage. The officer would carry his binoculars out of their case and around his neck. It was quite possible for the officer to wear his .38 pistol as well as a .45 Thompson sub-machine-gun. The infantry map case would be worn on the right side as also would the water bottle holder. The entrenching tool would be worn across the back or the ordinary shovel fastened to the back. The headgear probably was a helmet steel with net and shell dressing.
The officer examines a straw-packed bottle of Vino.
Right
A private of the Seaforth Highlanders of Canada, one of the two infantry battalions to fight its way through the town of Ortona, in battledress and equipment in battle order. In addition to his rifle, he carries a PIAT which was most useful for delivering explosives for the mouse-holing technique. For headwear, he wears a helmet steel, Royal Armoured Corps, commonly issued to carrier drivers as well as other AFV drivers. The battledress was sent up to the infantry about mid-October. Until this time, the nights had been bitterly cold. The helmet usually was covered with a net which held the shell dressing.

Resistance stiffened. On the left 2nd Canadian Brigade forced its way south into the hills where the German paratroopers, refused to evacuate any position until forced to do so by a deliberate attack, and so the bitter advance proceeded across the Apennines with some of the engagements fierce and costly. Finally, 1st Brigade occupied Compobasso on 14 October and on 15 October, 2nd Brigade took Vinchiaoura.

Eighth Army wished to develop Compobasso as an administrative centre, but as it and Vinchiatoura were still under shellfire, it was necessary to drive the enemy back out of range. Thus, during the last ten days of October, the Canadian Brigade extended operations and cleared the villages from the far bank, permitting as many men as possible to enjoy the recreation facilities of Maple Leaf Centre in Campobasso.

Upper Sangro and Moro – November-December 1943

November was a quiet month on the 1st Canadian Infantry Division's front with activity limited to an independent operation by 3rd Brigade on the upper Sangro to convince the enemy that the entire 1st Canadian Division was operating in this area.

On 4 December the forward Canadian battalion stood on the ridge on the south side of the Moro valley, while a similar ridge on the north side was strongly held by the enemy. General Volkes' immediate task was to force the Moro and capture the port of Ortona about two miles beyond. The achievement of these objectives cost the 1st Canadian Infantry Division three weeks of the bitterest fighting to be found in this campaign.

Despatch rider in tropicals, gauntlets, improvised cap and with .45 Thompson sub-machine-gun. The light Norton bike was easy to handle off the road.

There were two main crossings of the Moro on the Canadian front; one on the coast near the mouth; a second $1^1/_2$ miles inland, winding up the ridge to San Leonardo and cutting the Ortana-Orsogna highway $^1/_2$ mile east of Casa Berardi. General Volkes planned his main effort on the inland road.

The attack was launched on the evening and night of 5 December with the Hastings and Prince Edward crossing near the mouth, the PPCLI crossing at Villa Rogatti on the left, and the Seaforths astride the San Leonardo road in the centre. The Hastings attack, planned as a diversion, met with heavy opposition and withdrew according to plan. On the next day, 6 December, it was decided to establish a permanent bridgehead on the coastal flank and the Hastings crossed early in the afternoon, making a bridgement in face of fierce fire.

The PPCLI on the far left flank put in a successful surprise night attack, but had to fight hard to hold it against several spirited counter attacks on 6 December; while the Seaforths made very little progress in the main attack. Three companies crossed over into a shallow bridgehead in daylight on 6 December but were later withdrawn.

A new plan was drawn up which called for 1st Canadian Brigade to take San Leonardo, and the 2nd to exploit to the lateral road. The 1st Brigade attacked on the afternoon of 8 December, with the 48th Highlanders striking directly across the Moro to establish a bridgehead, and the RCR breaking out of the coast road bridgehead and moving south-west to San Leonardo.

The attack of the 48th Highlanders went well, taking all objectives, but the RCR was struck by a counter attack on 9 December which tore a dangerous gap between the 48th and the RCR. The engineers worked under fire throughout the night of 9 December bringing across tanks and anti-tank-guns, and in the morning the Seaforths and Calgary Tanks fought their way into San Leonardo. The Hastings were heavily counter-attacked on the same day, but the brigehead above the Moro held.

The Gully

The first phase of the December battle ended with consolidation of the 1st Canadian Infantry Division bridgehead. The second phase centered around a tiny watercourse running across the front south of the lateral road Ortona-Orsogna. This feature, simply called 'the gully', turned out to be such a formidable obstacle that it required ten days to fight across it and secure the crossroads just beyond.

Direct frontal attacks by battalions of 2nd Brigade having failed, 3rd Brigade was brought up to repeat the attempt. Frontal attacks being unsuccessful, efforts were made to get the Carleton and Yorks, and the West Nova Scotias forward by the left flank. Both battalions suffered heavily.

On 14 December, R22eR was committed to a flank attack on Casa Berardi, which after a desperate action, captured and held it.

When 'C' Company reached the objective, it consisted of Captain Paul Triquet, two sergeants and fifteen men. Captain Triquet was awarded the Victoria Cross, the first to be won by a Canadian in the Mediterranean campaign.

By 15 December the Canadians held a foothold beyond the gully and were able to threaten the flank and rear of the position. By evening of 15 December the 3rd Canadian Brigade was exhausted and operations were suspended for two days during which new efforts were prepared to attack by the left flank and drive through to the crossroads.

On 18 December, the 48th Highlanders, advancing with tanks of the Three rivers Regiment, took its objectives. Replacing the 48th Highlanders, the RCR continued the attack but failed to reach the crossroads. On 19 December the RCR put in a flawless attack which reached its objective with only three casualties. The enemy had pulled out of the gulley.

Ortona

The struggle for Ortona began immediately. On 20 December the Royal Edmonton Regiment moved up the lateral road from the crossroads towards the town.[2] On the right a Seaforth company put in a diversionary attack along the coast road in the face of fierce resistance. Though the Canadians were in the Western outskirts of Ortona by nightfall, the German paratroops were prepared to fight for the town house by house.

At first light on 21 December, the Edmontons and Seaforths began the reduction of Ortona. Only approachable from the south-west, the narrow streets and tall stone buildings set a most difficult task for the Canadians. The enemy had prepared the town for defence by blowing houses into the streets and covering the rubble piles with small-arms fire. The plan was to shepherd the attackers down the main street to the central square which they proposed to use as a killing ground. It soon became clear that moving down the streets was not the approved method of house fighting, and that mouse-holing using explosive charges to blast through one connecting wall to the next was a more acceptable form of house clearing.

During the first day, the rest of the Seaforths was brought in to help with the task. The two battalion commanders divided the town into sections and set about clearing it systematically. The tanks of the Three Rivers Regiment provided support by blowing the German paratroopers from their positions. High explosives were the master weapons of house clearing and, not only blasted a path from one room to the next, but were used to destroy entire buildings with their occupants. Anti-tank guns, both 6- and 17-pounder, also were useful for punching holes in the stone buildings. And while artillery was of limited usefulness, a battery of British heavy 7.2-inch howitzers proved effective against the ancient castle walls.

For an entire week the struggle went on, and 25 December, Christmas Day, saw the fiercest fighting so far. But the Canadian battalions provided a traditional Christmas dinner for the soldiers on tables set with white cloths in a captured church. The rifle companies were relieved for two hours each in succession for turkey dinner, carols on the church organ, and special music by the Pipe-major.

While 2nd Brigade fought on through the town, 1st Brigade pushed forward to the west to cut the coast road and the enemy's communications. Beginning on 23 December, and bogged by the rain and mud, this movement was successful. On 27 December, the Patricia's came forward to relieve the Loyal Edmontons only to find that during the night of 27-28th December, the German paratroopers gave up their positions and withdrew along the coast road leaving at least 100 of their comrades lying dead in the streets of Ortona.

With the fall of Ortona, Eighth Army's winter offensive came to a halt. The weather produced fields of mud which reduced the mobility of the tanks, and grey overcast skies which limited the usefulness of fighter aircraft. With the halting of the winter offensive, the 1st Canadian Infantry Division completed its first lengthy and continuous period of intensive fighting. It was in a state of exhaustion and quite unfit for further offensive operations until a period of rest and retraining enabled the battalions to absorb the reinforcements and restore the sharp fighting edge●

Digging out a house in Ortona booby-trapped by the enemy. Twenty Edmontons were killed in the explosion but incredibly one survivor was dug out three days later.

Notes

1 During the Casablanca Conference and the planning for post-Sicilian operations, no mention was made of the subsequent invasion of Italy. To the general public as well as to most of those taking part in the assault, the invasion must have seemed a logical sequel to the invasion of Sicily. But a detailed examination of the strategy reveals the two operations belonging to quite separate phases with the invasion of Sicily part of the closing of the North African Campaign, and that of Italy the opening of the European operations. The chapter on 'The Invasion of the Italian Mainland' in *The Canadians in Italy. Official History of the Canadian Army*, by G.W.L. Nicholson, reviews the development of the Italian campaign.

2 Even in the midst of battle, the establishment of regimental awards and protocol continued. One of Canada's outstanding infantry regiments was granted a change in title when, on 31 October 1943, the Edmonton Regiment was notified that 'His Majesty the King has been graciously pleased to approve the alteration in the title of the "Edmonton Regiment" to the "Loyal Edmonton Regiment". The original change in title was effective 7 July 1943, and affiliation granted with the Loyal North Lancaster Regiment. A change in the cap badge incorporated the Rose of Lancaster. (*Edmonton Regiment War Diary*, 31 October 1943.)

The Von Barner Battalion

Brunswick Light Infantry Battalion, 1776

German soldiers from the Duchy of Brunswick came to the assistance of the British fighting rebellious colonies in 1776. CLAUS REUTER describes the Canadian-German re-enactment group he founded and the uniform they wear.

In 1775, a defence treaty was signed between England and Brunswick and 4300 German troops were sent to serve in North America. The Light Infantry Battalion "von Barner" was a newly formed unit and was part of the second Brunswick Division which left Brunswick on May 15th 1776 to march to the port City of Stade. The unit arrived in Quebec City on September 17th 1776 after a thirteen week long sea voyage. Some soldiers of the unit stayed in hospital in Quebec to recover from sickness but the rest went on to serve under General Burgoyne and fought at Ticonderoga, Hubbardton, Bennington, Freeman's Farm, and Saratoga. At the end of the war, a third of the unit stayed in Canada and settled there.

We formed our re-enactment unit, the Brunswick Light Infantry Battalion "von Barner" in 1986. Our main goal is to demonstrate the important role Brunswick troops played in the defence and settlement of Canada. For the reforming of the unit we received the permission of His Royal Highness Ernst August, Duke of Cumberland and Duke of Brunswick. We also had the honour to interest Mr. Kraft Riedesel, Baron of Eisenbach as honorary major and Mr. Manfred Sadlowski, Publisher of the Meonch Group, as honorary Captain for our project. As a special honour we also have the Panzergrenadierbataillon 22 of the German Army as our other honorary Major.

The early years were very hard. At our first event we had altogether two soldiers in the field. We have now grown a little more. Most of our members are based in the Toronto area. In the winter time we drill every two weeks. With the help of archives in Wolfenbuettel we were lucky to find a Brunswick Drill Manual from 1770. This enables us to do the correct drill of the time. For the battlefield movements we use the Brunswick Manual but also have to fall back on literature explaining the movements of the Prussian and Army of Hanover of the 1770-80 period. A lot of changes in the movements of battlefield drill happened from 1760 onwards. In 1775 a lot of different moves were introduced, which most other units ignore. We operate as a line company or as a Light company according to the circumstances of the museum we are performing at.

Muskets are our most expensive re-enactment item. We carry Brown Besses and converted Brown Bess Muskets. The right Brunswick Muskets for our unit are impossible to get. We hope to build some Prussian Sniper rifles Model 1787 in the future to equip the unit. We are lucky because we have members who make the leather items and we also produce our own buttons and buckles. The uniforms we wear are based on the Prussian style pattern of 1760. Uniform drawings by Becher show this very clearly. In 1777, 592 such uniforms were ordered from the manufacturer Krause for shipment in North America. I will now describe the original Brunswick uniform as worn between 1776 to 1783.

The fabric for coats was a royal blue. The bolts of material were 125 cm wide. The material for the privates and NCO's coat was woven with 10 threads per centimetre. The material for officers' coats was a much better quality. It was woven with 18 to 20 threads per centimetre. The price was five times higher than the private's coat. The coats for the musketeer companies of the Light infantry batallion did not have lapels. The coat was cutback at the waist in front. The 12 equal spaced front buttons (on each side) had 30mm long button holes, so that the coats could be closed and buttoned over. This was called "Stehende Brust". This style was also used by the Regiment "Prinz Friedrich". All coats had the Swedish cuffs.

A black bicome was worn by everyone. The bicorn was edged with white lace for privates and silver lace for NCOs. A white and black hat cord with white and black tassels was worn. The NCOs wore a white and yellow cord with white and yellow tassels. The tassels did not hang over the edge of the bicorne. All privates of the Battalion "von Barner" wore a white and black pompom on top of the bicorn. The pompom showed which unit the soldier belonged to. The NCOs wore a white and yellow pompom. All Brunswick NCO's wore the same white and yellow pompom. White and yellow was the colour of the House of Brunswick-Wolfenbuettel.

A fatigue cap was also worn. The cap was made of blue wool with the bottom band in black. White piping ran up along all the seams. The tassel was the normal white and black. All hair was worn in a pig-tail. The length had to reach the waist. Soldiers without hair had to wear a wig. The pigtail was wrapped with a black hair band. Side curls were also worn.

The soldier's basic uniform consisted of smallclothes including a shirt, waistcoat and breeches. Waistcoat and breeches were made of white wool, but breeches were also made of white linen. The shirt was made of linen and it had a full cut. The sleeves of the shirt were tapered and buttoned at the cuff. The collar was 2 inches high and did not reach above the neckstock. Some sources also suggest that a shirt was worn which fastened at the back. The reason is that German troops sometimes wore the top buttons of the waistcoats open in the summer months. This way you could not see the gap where the shirt closed.

The neckstock was made of black linen with a stiffener inside. It was tied with thongs. Over the top edge of the neckstock they used a leatherstrip or piece of linen, the Bindenstrich. It imitated the old style shirt collar. With the piece of leather or linen every soldier would look the same. The folded over shirt collar did not give a uniform appearance.

The sleeveless waistcoat was made of white wool lined with unbleached linen. The front was closed by 12 brass buttons. the same was used on the coats. The waistcoat did not have pockets but only pocket flaps. Under each pocketflap were two buttons. All edges were raw.

The breeches were made from white wool or linen. They just reached under the knee and were closed by small brass buttons. The front flap reached from side to side and was closed by four brass buttons. There were no pockets in the breeches. White woollen stockings or foot rags with talcum were worn.

The shoes were made with a straight last. The heel was around one inch high. The front was square toed. The shoes were closed with laces. The black gaiters reached just above the knee. They protected the soldier's feet and legs. They were closed with 16 small brass buttons and a strap held them under the shoes. Under the knee black leather garters held the gaiters up. They were made from unbleached linen in a herringbone twill. They

were oiled or waxed in black. The oiling or waxing helped to keep the wetness out.

The coats were made to the Prussian pattern. The sleeves were tight but the coat was not uncomfortable. Behind the cuffs was a flap which is closed by two buttons to make it easier to put the coat on. The collar was similar to the British pattern. On the left side of the collar was a brass button to fasten the shoulderstrap. The strap was slightly behind the shoulder. The front of the coat just came to the waist, from there it was cut back and became the turnbacks. The turnbacks were held in place by red woollen tabs closed by brass buttons.

The pockets were probably false. On our coats we have pockets to carry personal items. They are closed with brass buttons. The folds in the back of the coat were held in place by brass buttons. It gave the coat more firmness. The lining of the coat was red throughout. The coat was closed with hooks and eyes. The collar and cuffs were black wool. The Swedish cuffs had two buttons on the front. The regulations allowed three and three-quarter Ellen of material, that is 2.2 metres of material. In 1777 that amount was cut back by 20cm to two metres of material.

The only difference in the NCO's coat was the absence of a shoulderstrap. The turnbacks were held by hooks and eyes and it had the NCO's lace around the collar and cuffs. The lace was gold braid. All NCOs and officers wore yellow coloured leather gloves.

The soldiers wore a waist belt made of whitened leather. It held the bayonet and hanger. The buckle was manufactured from sheet brass and it just hooked together with a brass piece on the end of the leather belt. It helped for quick unbuckling. The bread bag was made of linen and was worn on the left hip. The bag was usually closed with a fabric covered button. The bread bag held all the soldier's food.

The tornister worn by all the various German armies was also worn on the left hip. The tornister was worn over the bread bag. It was made from calf skin and was roughly 27 cm by 27 cm. The tornister was closed with two white straps with brass buckles. The shoulder strap was also made from white leather. The length could be adjusted through a brass buckle. The tornister was worn fairly high, it held all the personal belongings of the soldiers. Bread bag and tornister acted as a counter weight to the cartridge box which was worn on the right hip.

The waterbottle was made of tin plate. It was approximately the same shape as the British pattern, but it was much larger. It held four litres of water, had a screw top with a cup over it. It was worn on the left hip and was held by a white leather strap. Every fourth soldier carried a water bottle.

The cartridge box held 30 rounds in a leather or wooden block. Under the block was a wooden tray which held another 30 rounds of ammunition. The white leather belt was between 90 and 110mm wide. It was fastened to the box by inserting two brass buttons on each side. Under the front flap was a small leather compartment for spare flints and tools. The box was closed with a leather strap which fitted over a brass pin. On the flap was the cartridge box plate. Apparently two different manufactured plates existed. There was a die struck version and a cast version. We do not know which unit wore the plate we are using.

Every soldier carried a short sword, or a hanger. It was the Prussian pattern and it was worn until 1807. The hanger was a status symbol only. A swordknot was carried on the hanger. It had different colours for the various companies. The Leibcompany which we are portraying wore a white swordknot. NCOs and officers wore a white and yellow knot.

The Light Battalion probably carried an artillery carbine with a bayonet. We could not find an original anywhere, but we have the information that artillery carbines were made in 1776. We also do not know what the bayonet looked like. The artillery carbine was a shorter version of the infantry musket. The sling was made from red leather and was held on the muskets on the normal front swivel. The rear was held on a swivel behind the triggerguard. Two small brass buckles were near the swivels. The part of the sling from the triggerguard to the front swivel was tightened by a leather thong which fastened to the triggerguard. The rear of the sling was in a bow. This way you just untie the leather thong and you could sling the musket over the shoulder●

Military Illustrated is committed to publish the work of re-enactors, especially in the field research, and would like to hear from all such societies in Britain, America, and around the world.

Above
Two privates of the Brunswick Light Infantry Battalion. Note white swordknot for senior company and white and black pompom.

Right
Private of the Brunswick Light Infantry Battalion wearing uniform as worn throughout the war in Canada 1776 to 1783. He carries a carbine.

Imperial Illustrator: Stanley L. Wood

PETER HARRINGTON, curator of the Anne S K Brown Military Collection at Brown University, recounts the life and work of one of the great Victorian military artists.

Stanley Llewellyn Wood was born in Newport, South Wales in 1866 but moved with his parents twelve years later to the United States of America, where his father set up a ranch in the middle of the Indian territory of Kansas. The bodies of the former owners, killed by Indians, lay buried in the back garden, and the young boy may well have met the same fate but for his mother's cunning. Shortly after the death of his father, a war party of Ute Indians surrounded the house at night. Mrs. Wood placed lights in every window and had her children put on boots and spurs, to tramp up and down the stairs so as to make as much noise as possible. Believing that the house was held by a strong force, the Indians retreated.

It is not known when Wood returned to Britain or with whom he studied art, but his pictures began to appear in various London exhibitions after 1885. He exhibited five canvases at the Royal Institute of Painters in Oil Colour, three pictures at the New Water Colour Society, and seven pictures at the Royal Academy, between 1892 and 1913. With the exception of his 1903 picture, *A bucking bronco; souvenir of Texas* and his picture at the 1912 Academy exhibition, *"Snarleyow"*, the majority of his oil paintings depicted military events. His three pictures of 1892, 1894 and 1895, all took the Royal Horse Artillery in action as their theme. The first picture was entitled *Royal Horse Artillery going into action, Afghan Campaign*. Two years later came *A battle incident: Horse Artillery going in under fire* illustrating a battle scene in which one of the leading horses lies fallen and bleeding. A reviewer stated "... few would have the courage shown by Mr. Stanley Wood in his remarkable battle incident, in which the battery of horse artillery going into action seems to move before the eyes of the spectator." In 1895 he exhibited his final picture of the trilogy, *Halting the battery: Horse Artillery coming into position*. Wood depicted another scene of conflict with *A surrender under protest; an incident in the Matabele war* exhibited in 1897. For the next sixteen years, he failed to exhibit a military scene until his last canvas of 1913 titled *The Guides at Fattehabad* also illustrating a scene from the Second Afghan War.

Wood never achieved much success with his exhibited canvases and hardly any of them received a review in the press. In contrast, his work as an illustrator in black and white and in water-colour, was highly regarded and his services sought after by publishers. Many of his drawings were also of military scenes and one of the earliest publications to include his pictures was an interesting book by several authors entitled *The Great War of 189-: A Forecast* published by Heinemann in 1893, originally published in *Black and White* magazine. This prophetic book set out to examine the course of events preliminary and incidental to a Great War "which, in the opinion of the authors, will probably occur in the immediate future," and Wood provided numerous battle illustrations

Types of British Cavalry Regiments painted by Stanley L. Wood in 1899.

painted in 1892 from sketches specially drawn for *Black and White* by Frederick Villiers. Wood did other work for *Black and White* including drawings for the weekly *Black and White Budget (Transvaal Special)* depicting the events of the Boer War. His pictures of the same war were used by Cassell and Company in their two volume *History of the Boer War, 1899-1902* along with illustrations by, among others, Seppings-Wright and Caton Woodville, and in Louis Cresswicke's *South Africa and the Transvaal War* which included a dramatic scene by Wood from a sketch by an officer showing the capture of a Boer convoy by General French's troops near Kimberley.

Wood provided nine illustrations for D.H. Parry's book, *Britain's Roll of Glory or The Victoria Cross*, which was published in August 1895. Some of his finest work appeared in Henry Newbolt's *The Book of the Thin Red Line* published by Longmans in 1925. This book described the lives of five British soldiers and one American, and for it, Wood supplied eight fine watercolours of dashing cavalry charges at Albuera, Waterloo, Aliwal and Chillianwalla, and infantry and artillery in action at Badajos, Lucknow, Chapultepec and Bull Run. A further 38 uncoloured drawings embellished the text. Two other books by Henry Newbolt were illustrated by Wood, *The Book of the Long Trail* and *The Book of Good Hunting*.

A number of adventure novels about military events by Captain Frederick Sadlier Brereton were illustrated by the artist. These were *With shield and assegai; a tale of the Zulu War* (1900), *One of the fighting scouts; a tale of guerilla warfare in South Africa* (1903), *Roger the Bold; a tale of the conquest of Mexico* (1906), *A hero of Sedan; a tale of the Franco-Prussian War* (1910), and a non-military story, *Roughriders of the Pampas* (1908). One of George Alfred Henty's adventure novels entitled *Rujub the Juggler* (1894), was set in India during the mutiny for which Wood provided 8 illustrations, and in the same year, he completed six illustrations for Bertram Mitford's *The King's Assegai* which was a story set in Matabeleland. In 1908 appeared *In Empire's Cause* by Ernest Protheroe, containing other military scenes by Wood.

During World War One, Stanley Wood's talents were put to use as an illustrator for several patriotic and children's books. Two watercolours by him, depicting Types of the British Army Today in Fighting Kit, and Types of the British Army which fought at Waterloo, were used in *The British Army Book* by Paul Danby and Cyril Field, published shortly after the outbreak of war. A large fold-out photogravure plate specially painted by Wood was used as a supplement to *The War Illustrated* of December 18th, 1915. It was titled *The New British Army in the Day of Victory: September 25th 1915*, and it depicted a charge by Scottish troops at Loos. An oil painting from the same period depicted British troopers and their horses by a ruined farmhouse in France in 1915.

While Wood is principally known as a military artist, he produced numerous illustrations for other publications and he was employed for many years by Messrs. Chatto and Windus as an illustrator of boys' adventure stories. These included *Maid Marion and Robin Hood* (1892), George Manville Fenn's tale of smuggling, *The lost middy*, K.H. Pritchard's *Don Q, son of Zorro*, and Charles Hyne's *Captain Kettle* stories. Francis Edwards published Sir R.F. Burton's translation of Arabian Nights and Wood supplied 100 illustrations. Like his contemporary, Richard Caton Woodville, Wood also illustrated an edition of Rudyard Kipling's *The Absent-Minded Beggar*.

In addition to book illustration, Wood's pictures appeared in numerous magazines and newspapers including the *Illustrated London News, The Graphic, Cassell's Family Magazine, The Sporting and Dramatic News, The Windsor Magazine* and *The Idler*.

He died at his home in Palmer's Green, London, on Thursday, March 1, 1928. His obituary in *The Times* described his as "a fine all-round athlete, a swimmer, boxer, and horseman, and had travelled extensively."•

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Charge of the Scots Greys at Waterloo, 1815, from *The Book of the Thin Red Line* published by Longmans, 1925.

British square at the battle of Abu-Kru, 1885, in the Sudan, from *Battles of the 19th Century* published by Cassell & Co., 1896.


V.Vuksic

The Gothic Knight

European cavalry armour, late 15th Century

Without doubt, Gothic armour is the pinnacle of the medieval metalworkers' art. DICK FISCHER describes the style, strength, and weakness of this armour. VELIMIR VUKSIC reconstructs an armoured horseman of the period.

Beginning in France around the second half of the 12th century, the Gothic style spread quickly throughout all of western Europe, expressing itself most powerfully in architecture. Pointed arches over doorways and on ceilings, the arched roof shape and imposing buildings characterised the style until it went out of fashion in Italy in the early 15th century and in the rest of Europe near the end of the 16th century. The name 'Gothic' originated during the Renaissance and has a disparaging tone, reflecting a classical prejudice toward the art of the 'barbarians', or Goths. Goths, after all, were the eastern Germanic people who had destroyed many building of great artistic value as they ravaged the provinces of the Roman Empire.

Around the 14th century, protective armour for warriors, similar in appearance and quality, was being produced in Europe's more advanced metalworking centres. But by the beginning of the 15th century, master armourers of northern Italy, particularly the Missaglia family of Milan, took the technology of metalworking a step further, producing a so-called 'homogeneous' armour which completely covered the warrior's body. Although full body armour began to be produced elsewhere as well, by the end of the 15th century the skill of the Italian armourers had outpaced the rest, with their only serious competitors coming from German armourers in Landshut and Innsbruck. It is interesting that, even though Gothic art was already in decline, both the Italian and German armourers utilised the pointed gothic arch, both for decoration as well as to strengthen the armour plates. The characteristic shape of the helmet (known as the *sallet*) by which the armour is most easily identified, resembled a Gothic arch. But, as with the art of the Italian and High German Gothic artists, the armour was not called 'Gothic' until the 19th century.

The second decade of the 15th century saw the full flowering of the armourer's art. Whereas it is true that armour of top quality was produced later, at no other time did the armourer combine such great technical skill with such a great appreciation of the qualities and limitations of his material. Decoration was kept subservient to function with the result that close attention was paid to subtleties of line and form. It is probably justifiable to conclude that in these qualities the finest armourers of the period rival many of the finest works of contemporary sculpture, to the extent that the phrase 'sculpture in steel' has been applied to Gothic armour.

Both Italy and Germany exported large amounts of this kind of armour and their influence swept through most European countries, with many Italian or German armourers entering the service of the courts of Europe.

Militarily, Gothic armour had its advantages, but also deficiencies, for which it was later surpassed in the ongoing process of improving body protection. Its greatest feature was how little it restricted the warrior's freedom of movement. It was so well adapted to the human anatomy that it enabled the warrior not only to sit on a stool but also to mount his horse. Long, pointed metal shoes, which must have look ridiculous when walking, were added as a fashion detail only at the very end of the century. The warrior's helmet did not rest on his shoulders but sat freely on his head, much as those worn by todays soldiers, which did facilitate the warrior's mobility. Consequently, however, the impact of a heavy blow, even if it did not pierce the helmet, was absorbed by the head, which could take the warrior out of combat.

The armour was also more comfortable to wear. Unlike long mail, with its heavy 45 lb all hanging from the warrior's shoulders, the individual pieces of Gothic armour were strapped to the appropriate parts of the body with leather belts, so that its approximately 55 lb were distributed evenly and much easier to carry. The insides of the shoulder and arm joints were not covered by plates, but were protected by mail so as to permit maximum mobility. But this was also its greatest weakness, as it could be pierced at these paoints. Opposing infantry warriors carried specially designed short pointed polearms for penetrating these vulnerable places. The primary weapon carried by the armoured knight was his 12-15 ft heavy lance.

Parallel to the appearance of the warrior's full body armour was the introduction of horse armour (*bards*) weighing between 65-90 lb and the tall armoured saddle weighing up to 25 lb. For this reason huge, powerful, horses were bred which were able to carry the weight of both the armour and rider. Because warriors led these by the right hand, these were called destriers – derived from the Latin *dextrarius*: in the right hand. These horses were specially trained to be easily handled with one hand. The reins were made extra long, so that with the slightest tug the rider could apply greater pressure on the horse's tongue and edge of the lips, thereby turning the head, and horse itself, in the desired direction. All together the Gothic knight, his armour, the horse and horse armour weighed from 1,750-2,000 lb.

Making its appearance at about the same time as Gothic armour was the Swiss infantry which, on several occasions, had decisively defeated feudal cavalries, most notably Charles the Bold, the Duke of Burgundy, in battles of Grandson and Morat in 1476. Fighting in tight, closed formations with long pikes, the Swiss infantry looked like hedgehogs, and were almost undefeatable by cavalry. The only chance of seriously threatening such formations was armoured cavalry mounted on equally well armoured horses. The energy which such a moving cavalryman conveyed equals a modern middle size automobile moving at 10-15 mph, so that for a Swiss infantryman to stop this charging one-ton monster would take considerable courage and skill•

Tank Fist

Panzerfaust anti-tank gun

Dr. STEPHEN BULL describes the development and performance of this revolutionary German World War Two rocket launcher, forerunner of most modern anti-tank weapons.

FROM THE SUMMER of 1942 the Wehrmacht faced ever more effective and thickly armoured tanks in the hands of its enemies. Foremost amongst them was the Russian T-34, without refinement but tough and fast, and made in huge numbers. Antitank rifles were useless against it and the job of finding a cheap, man-portable, antidote fell to the forces weapons office or *Waffenamt*, sub section *Waffen Pruf 11*.

Above
Wrecked Sherman M4 of the 6th Armoured Division after the battle at Magret Belgium, 1944. The original caption states that it was knocked out by a "bazooka" a term applied by the allies to the Panzerfaust and Panzerschreck rocket launchers.

Below
German tank hunting crew, 1945. In the foreground wearing a zeltbahn or waterproof cape is soldier with a Panzerfaust 100.

Waffen Pruf was the department dealing with all weapons proof and development and sub-section 11 was devoted to rockets. The driving force behind the project would be Dr Heinrich Langweiler of *HASAG* Leipzig[1].

Langweiler seems to have grasped very quickly that there were two important principles which could be harnessed to allow a man to destroy a tank. The first was the 'hollow charge' principle. As early as the beginning of the nineteenth century a mining engineer called Baader had noted that less explosive was needed if a hollow space was left between the blasting agent and the material to be mined. Tests were inconclusive but in 1885 Munroe of Washington was able to demonstrate that a hollow charge was the most likely to penetrate a metal plate. In the first decades of the twentieth century further work, especially by Lodati in Italy, showed that the shape of the hollow determined the nature of the penetration; a cone shaped hole with an apical angle of 50 degrees being found to be most effective.

This worked because within a hollow the explosive force was 'focused' along its axis. At the open end of the cone a 'jet' of maximum power was formed at its centre, but the best effects were achieved when the cone stood clear of the target by a distance equal to one diameter of the cone. Penetration was improved by fitting the cone with a metal liner. This melted and was pushed through the target. By the beginning of World War II, this principle was already being used in demolition charges.

The other principle which Langweiler sought to harness in his new weapon was that of recoillessness. As identified by Davis of the American Navy in 1910, if an equal and opposite force was introduced there would be no recoil. This he demonstrated by placing a charge in the centre of a barrel open at both ends. With shots discharged from either end of the barrel simultaneously, there was no 'recoil' force and the barrel was not moved. In the 1930's Krupp engineers revived the Davis idea but reasoned that no second shot was really necessary since a mass of gas could be used especially if the tube or barrel was suitably shaped[2].

Langweiler's first tests were with a tube 35mm long into which a hollow charge bomb on a stick was inserted. The whole thing weighed only 2kg and was held out at right angles to the arm; there were no sights and hits were secured as much by luck as judgement. This outlandish device proved however, that the idea could work and gave the weapon its first name, the *Faustpatrone* or 'fist' cartridge'. It was realised that the weapon needed better sighting and so in the second prototype it was designed to be held closer to the body. This presented considerable problems of flash and backblast so the tube was lengthened to direct the thrust away from the firer. The third model was redesigned to improve ballistic and penetrative performance. It was this weapon, completed in December, 1942, which finally entered service. Although sometimes known as *Faustpatrone I* or *Gretchen* it was later designated *Panzerfaust (Klein) 30m*, to distinguish it from other models. It had a muzzle velocity of 30 metres per second and was capable of penetrating 140mm of armour plate placed at an angle of 30 degrees to the firer. Almost immediately, a second model, initially known as *Faustpatrone II*, was also built. This was finished in January, 1943, and upped the weight of the explosive in the war head from about 0.75kg to 1.5kg. Armour piercing capacity went up to 200mm and the larger weapon was rechristened *Panzerfaust (Gross) 30m*.

The earliest Panzerfausts were sighted only to 30 metres and the speed of the projectile was scarcely better than the delivery of a fast bowler but the weapon had some significant advantages over its rivals. Antitank rifles were now pretty much out of the running due to lack of penetration; grenades and demolition charges required that the user be even closer; and the British *PIAT* was heavy and initially at least, required some quite muscular performances to cock it. By comparison, the *Panzerfaust (Gross) 30m* was light at 5kg and disposable. Demonstrations of both the small and large Panzerfaust were carried out to Heereswaffenamt at Kummersdorf in March, 1943[3].

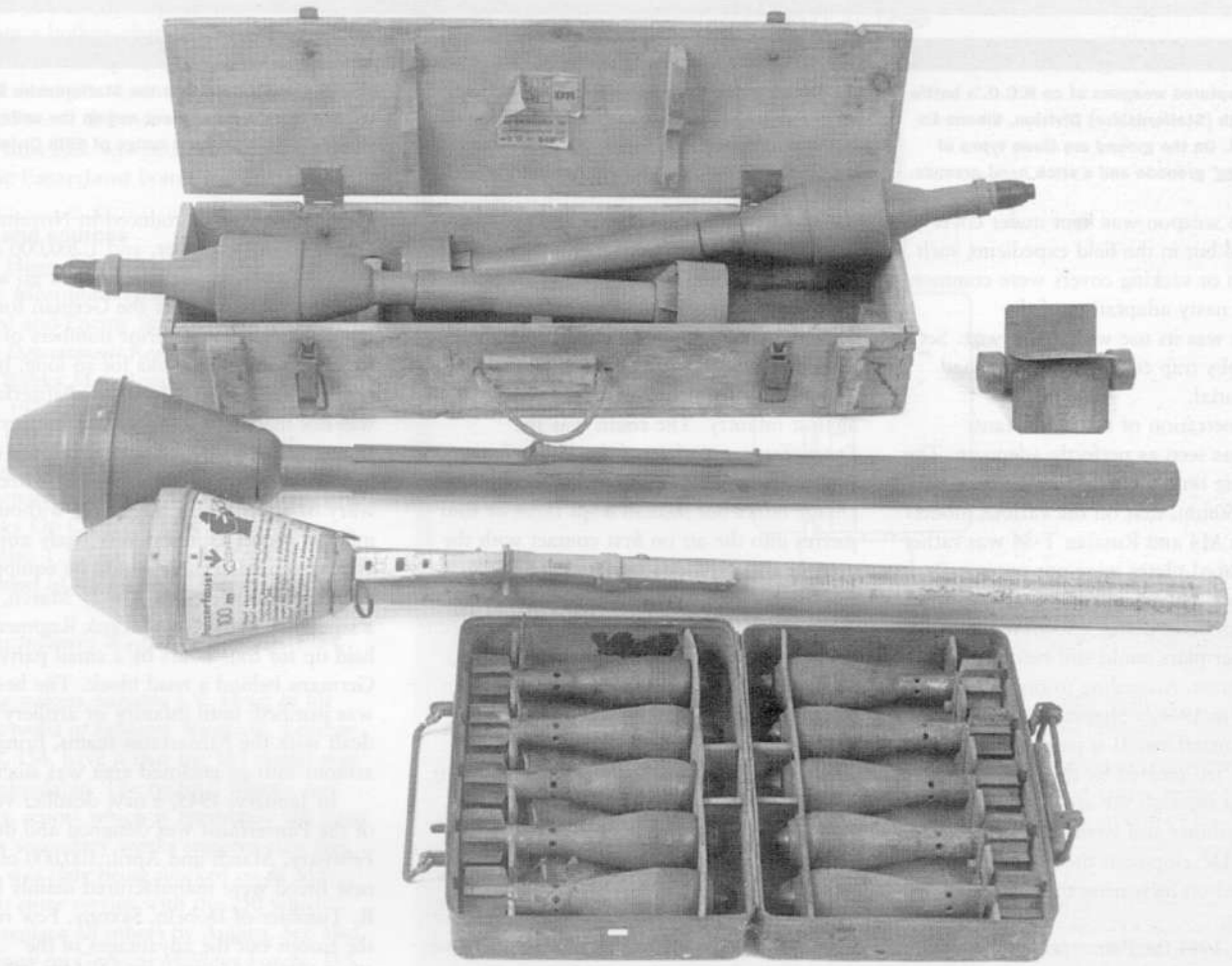
As a result of the Kummersdorf tests 3,000 of each model were ordered for troop trials on the Eastern Front. Results were good and mass production was therefore ordered in October, 1943. An ambitious target of 100,000 (Klein) and 200,000 (Gross) was set per month, this was actually achieved in April, 1944. Proofs of the weapons were carried out in three stages; originally each tube was proved by firing with a proof charge and a dummy head; later this was superseded by a proof with water under pressure. Fuses were manufactured in lots of 1500, out of each lot, 20 were taken and fired in dummy heads against an armour plate. Any failure would lead to a second sample being taken; if

there were any failures in the second sample the whole batch would be refused. At the final stage of proof four boxes, each containing four Panzerfausts, were taken from every lot of 1500. All bar five, were simply checked as to dimension and machining; the five selected were fired on the proof range at Schlieben near Hertsberg. The target they had to penetrate was three 55mm armour plates with 25mm air gaps between them. Only one failure was allowed.

Performance in action was generally very good but the firer had to bear two things in mind. First the Panzerfaust like all recoilless weapons was not to be fired from an enclosed space, nor with friendly troops to the rear; to do so would trap the back blast and kill or burn the unwary. A helpful reminder to the troops was the words *Achtung Feurstrahl* and an arrow indicating the direction of flash written on the firing tube. The grenadier also had to be aware that a kilogramme of explosive going off less than 30 metres away was likely to cause considerable mayhem; steel helmets were therefore worn against splinters and the firers were well advised to drop the empty tube and take cover or evasive action against any survivors.

The firing sequence took the following steps. The safety pin which locked the trigger mechanism was withdrawn. This allowed the rear sight to be erected and freed the trigger ready for firing. The firer now adopted a suitable position. When standing, the tube was actually tucked under the arm with the end well clear of the body; from trenches or prone, the tube could be placed over the arm but in both cases it was necessary to make sure the rear aperture was not obscured. Using a point on the bomb head as a foresight the operator took aim on the target through the rear peephole. Squeezing the trigger marked *Feuer* released a striker which hit the percussion cap and ignited the launching charge.

The Panzerfaust could be a frightening weapon to use but malfunctions were reasonably uncommon. Poor storage or excessive damp could cause failures where rust locked the bomb fins or water neutralised the propulsive charge. Where



Collection of projectiles (top to bottom) for the Raketenpanzerbuchse; the Panzerfaust 60; the Panzerfaust 100; and a case of 5cm mortar bombs. (Courtesy Kent Sales)

Examining captured weapons at an N.C.O.'s battle school of 59th (Staffordshire) Division, Vienne En Bessin, 1944. On the ground are three types of mines, an 'egg' grenade and a stick hand grenade.

On the left is the Raketenpanzerbuchse 43 with its 88mm projectile. Held vertically above the mines is a Panzerfaust (Gross) 30. Just visible is the stencilled warning "Actung Feuerstrahl".

The sergeant's beret has the Staffordshire Knot of the Staffordshire Regiment and on the uniform shoulders the triangular badge of 59th Division.

possible the weapon was kept under cover until needed but in the field expedients such as tarpaulin or sacking covers were common. One rather nasty adaptation of the Panzerfaust was its use with a trip wire. Set up as a booby trap covering a road it had lethal potential.

The penetration of the Panzerfaust warhead was seen as perfectly adequate. The thickest plate on a Churchill MK VII or VIII was only 150mm, that on the various models of Sherman M4 and Russian T-34 was rather thinner. Spaced plates were not necessarily an answer either as Langweiler's data suggested that a 50mm outer plate, a 500mm gap and a 100mm inner plate could still be defeated by the Panzerfaust. According to one account in Normandy in 1944, a Sherman was hit in the side by a Panzerfaust as it passed down a street. The 'jet' created by the exploding charge went through the crew compartment killing the gunner and went right out of the other side. Development therefore, concentrated on increasing the range of the Panzerfaust.

In early 1944 the *Panzerfaust 60m* was completed. This had a thicker tube, a stronger firing cap, a larger propellant charge, an improved fuse and a bomb with a fixed joint between the head and tail shaft. As the name suggests, effective range was increased to about 60 metres and muzzle velocity to 45m per second although sighting was up to 80 metres. As *Panzerfaust 60m* came on stream, the old *Panzerfaust Klein 30m* was gradually discontinued. At about the same time the army expressed a requirement for a fragmentation effect against infantry. The result was the *Sprengfaust*, a variant of the *Panzerfaust 60m* with a remarkable bomb. It had no hollow charge effect but instead leapt three or four metres into the air on first contact with the ground and exploded into a cloud of fragments. This model does not, however, appear to have got beyond trials; it was seen as unnecessarily complicated and the army suggested instead a simple sleeve for fitting over the ordinary Panzerfaust head when required.

By September, 1944, another increase in range was achieved with the Panzerfaust 100m, which was in production by November. This model was actually sighted to 150m, and the increase in range was achieved by having two propellant charges, slightly separated by an air gap. Ignition was fractionally staggered and led to a smooth and rapid increase in velocity. Production now reached truly amazing proportions. According to the memoirs of Albert Speer, the Armaments minister, 997,000 Panzerfausts were produced in November, 1,253,000 in December, and 1,200,000 in January, 1945. These figures must go some way to explaining how the German forces managed to resist superior numbers of Russian and Allied tanks for so long. It is notable that the success of the Panzerfaust was not merely in terms of the numbers of enemy tanks destroyed with it but the effect it had on allied tactics. Tanks were extremely wary of approaching any cover without infantry escort as it was very likely any Germans hidden there would be equipped with antitank weapons. On 29 March, 1945, a squadron of 1st Royal Tank Regiment was held up for four hours by a small party of Germans behind a road block. The hesitancy was justified: until infantry or artillery had dealt with the Panzerfaust teams, bringing armour into an enclosed area was suicidal[4].

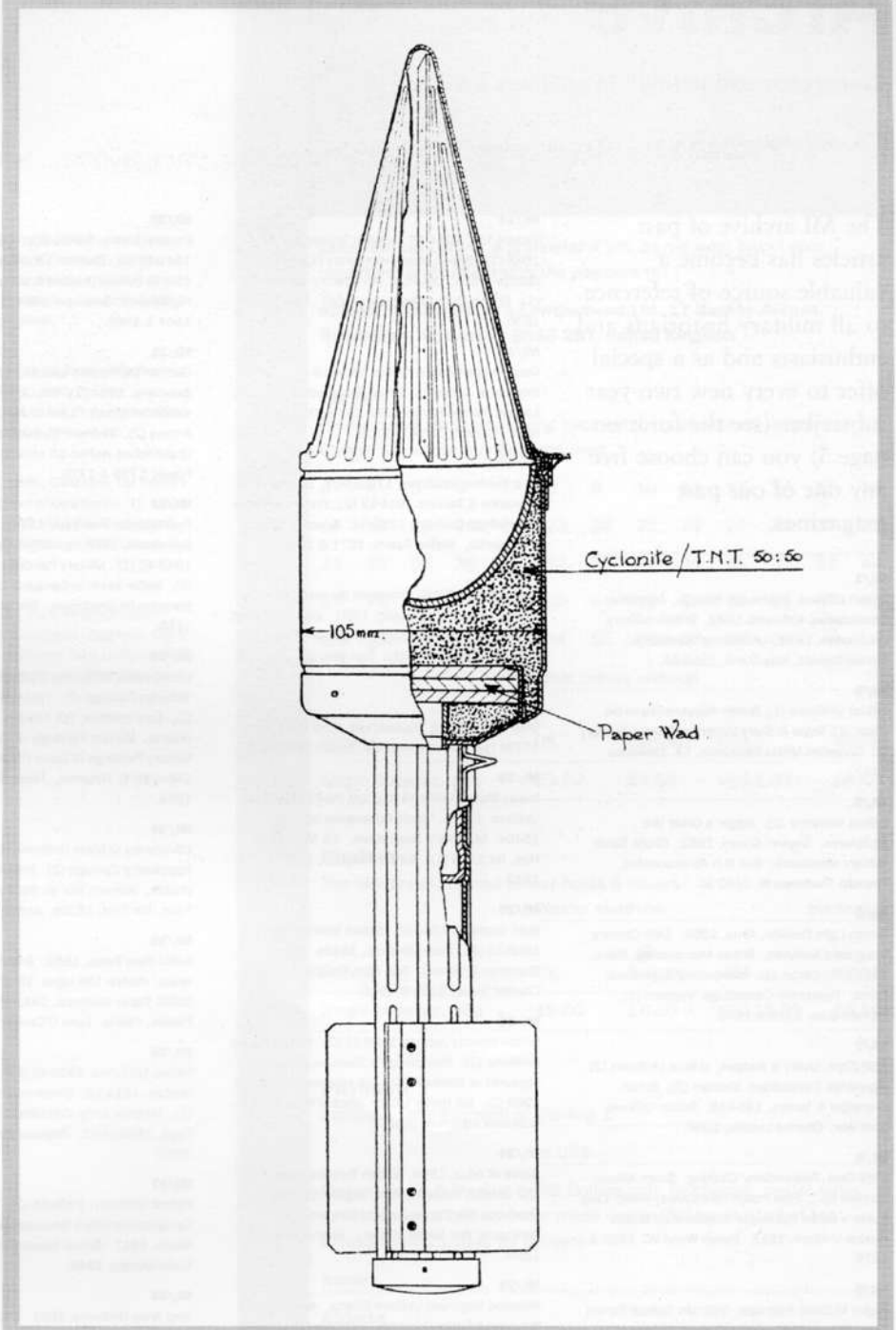
In January, 1945, a new deadlier version of the Panzerfaust was designed and during February, March and April, 100,000 of this new breed were manufactured mainly by R. Tumbler of Dobeln, Saxony. Few reached the troops but the advantages of the *Panzerfaust 150* were considerable. Range was increased again up to 300m but bomb weight was reduced, apparently without affecting its performance. The weapon was also provided with the antipersonnel

fragmentation sleeve which the army had requested[5].

Even this was not the end of the story for while the allies were overrunning and beginning to examine testing facilities the final version of the Panzerfaust was under development. It is not perhaps surprising that the *Panzerfaust 250* bears more than a passing resemblance to the Russian RPG2 as it would appear that the Soviets made immediate use of captured information[6]. The bomb tail of the *Panzerfaust 250* was the longest yet, and to increase range the propellant charge was also increased and the rear end of the firing tube constructed with a venturi. The most novel features were that the Panzerfaust 250 was reloadable and operated by electric firing from a pistol grip[7]. This was a distinct improvement over the firing mechanism of the previous models which was a simple trigger and hammer which struck a percussion cap. Another improvement under development at the end of the war was a periscopic aiming device to be made by Zeiss of Jena — like the multi shot adaption this was curtailed by the end of the war.

Perhaps the most amazing application of the Panzerfaust under investigation in 1945 was anti-aircraft use. It was reasoned that if a 'jet' from a hollow charge bomb could be projected far enough and accurately enough it could damage an enemy aircraft even if it exploded some distance away. To this end, a special time fuse was being perfected for use with the Panzerfaust bomb[8]•

Diagram of projectile for Panzerfaust 150 with narrower and more pointed head. The fins are rectangular.



Panzerfaust Performance Data

Type	Muzzle Velocity Metres per second	Armour Penetration At 30 deg. to normal	Sighted Up to
Panzerfaust (Klein) 30	30	140	30m
Panzerfaust (Gross) 30	30	200	30m
Panzerfaust 60	45	200	80m
Panzerfaust 100	62	200	150m
Panzerfaust 150	82	200	200m
Panzerfaust 250	120-150	200	200m

Notes and sources

1 The Hugo Schneider Aktien Gesellschaft.

2 A.D. Merriman 'Hollow Charge Weapons in Allied and Enemy Service'. *Armaments Design Department Report*, May 1944. See also J. Weeks *Men Against Tanks*, Newton Abbot, 1975, pp.9-18, 132-136.

3 A.R.F. Martin and S.A.B. Hitchins 'Development of the Panzerfaust', *British Intelligence Objectives Sub Committee*, 1945.

4 Weeks *Op Cit* p.73.

5 See also T.J. Gander, *Field Rocket Equipment of the German Army*, London, 1972.

6 *Janes Infantry Weapons*, London, 1984, p.725.

7 Some writers, notably I.V. Hogg in his *Encyclopedia of Infantry Weapons*, London, 1977, P. 154, have it that the 150 model was to be reloadable. The original Martin and Hitchins report which is apparently the basis of most secondary works suggests that this facility was only being worked on in May, 1945, to enter service with the 250 which would replace all others by August. See also *Handbook on German Military Forces*, U.S. War Development, Washington, 1945, Part VII p.2.

8 Armaments Design Report (Ashby).

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Indian Mutiny Uniforms (1), US 7th Cavalry Dress Uniform, 1870s, Scots Covenanter Infantry, 1640s, Matania's illustrations, US Marines at Hue, Tet 1968 (1), Robert Craufurd, 1779 & 1810.

MI/20
Bren Gunners, 1944-45, British Infantry Jackets 1808-15 (1), Maori Warriors, 1840s, Film Stuntman Interview, Dien Bien Phu (2) Para Bns., Charles Young, 1889 & 1916.

MI/21
British Infantry Jackets 1808-15 (2), Indian Mutiny Uniforms (2), Malborough's Trophies Flags Captured at Blenhaim (2), US Marines at Hue, Tet 1968 (2), Bill Horan's Cape Frontier Wars Models, Gustavus Adolphus 1632.

MI/24
Battle of Adua, 1896, British Trenches, 1914-18 (2), London Trained Bands, English civil War (2), Freelance War Correspondent Interview (2), Peninsular War Medal Mystery, Rani of Jhansi, 1858.

MI/25
Waterloo Regiment Uniform Charts, Anatomy of a Waterloo Infantry Company, Interview 'Sharpe' Author, North-West Frontier, 1920s-30s, Vietnam SEALs, Henry Hardinge, 1815 & 1845.

MI/26
Re-enactors, 23rd Fusiliers, 1770s (2), Commando Uniforms 1942-45 (1), First Canadian Contingent 1914 (1), Boer Uniforms, 1899-1902 (2), American Civil War New Film and Book, Johannes Steinhoff, 1942 & 1966.

MI/27
Siege Engine Reconstructed, Dien Bien Phu (4) Equipment, WWI Webley, 1942 Battle Jerkin, 1990 SCAMMS Show Report., Re-enactors, 23rd Fusiliers, 1770s (3), Minamoto-no-Yoritomo, 1182.

MI/29
British Light Infantry Caps, 1770-99, Macedonian 'Whiteshields', 3rd-2nd Cs. BC, First Canadian Contingent, 1914 (2), Numbering of British Infantry Weapons, 1815, British 1942 Battle Jerkin (2), Charles Napier, 1809 & 1843.

MI/30
Dahomey Army, 1840s-90s, Commando Uniforms 1942-45 (2), German 1910 Tunic researched, 15th C. Balkan Leaders & Armies (1), 93rd Highlanders, Balaclava 1854 (1), David Lownds, 1944 & 1968.

MI/31
German De-Nazified Awards, 93rd Highlanders, Balaclava, 1854 (2), Nat. Army Museum Waterloo exhibition figures, 15th C. Balkan Leaders & Armies (2), Vietnam 'Bird-dog' pilot's memories, Unpublished Waffen-SS camo trousers, Simon Fraser, 1759 & 1775.

MI/32
Foot Guards, Inkerman, 1854, First BEF Gasmasks, 1915 (1), USMC Camo Uniforms, 1942-45 (1), Military Paintings of David Cunliffe (1), Battle Jerkin in Canadian Service, 1990 Waterloo Re-Enactment, Richard I of England, 1190.

MI/33
USMC Camo Uniforms, 1942-45 (2), Napoleon's Waterloo Carriage (1), First BEF Gasmasks, 1915 (2), Euro militaire '90, Chicago '90 model show reports, Military Paintings of Dubois Drahonet, Military Paintings of David Cunliffe (2), Test-firing 16th-18th C. Firearms, Frank Richards, 1901 & 1918.

MI/34
US Infantry Officers Uniforms, 1898-1902, Napoleon's Carriage (2), British Gulf orbat & photos, Vietnam War on the Screen (1), Col. Sgt's Tunic, 8th Foot, 1820s, Andrei Vlasov, 1942-44.

MI/35
Kabul Field Force, 1880, British Napoleonic officer relics, French 18e Ligne, 1809, Reconstructed, USMC Camo Uniforms, 1942-45 (3), Lancaster Pistols, 1880s, Luke O'Connor VC, 1854 & 1873.

MI/36
Panzer Uniforms, 1939-45 (1), Green Howards Medals, 1914-15, British Infantry of 7 Years War (1), Jacobite Army, Culloden, 1746 (1), Boer Flags, 1899-1902, Zbigniew Ziemski, 1943 & 1952.

MI/37
Panzer Uniforms, 1939-45 (2), Napoleonic Canadian Fencibles Reconstructed (1), Messines Mines, 1917, British Infantry of 7 Years War (2), Audie Murphy, 1945.

MI/38
Iraqi Army Uniforms, 1991, Cape Mounted Riflemen, 1827-70, Napoleonic Canadian Fencibles Reconstructed (2), London Territorials, NW Frontier, 1919, Jacobite Army, Culloden, 1746 (2), Tadeusz Kosciuszko, 1781 & 1794.

MI/39
36th Ulster Div., 1914-18, Elizabethan Light Horse, 1590s, 17th Lancer, 1854, Reconstructed (1), US Infantry Accoutrements, 1812-14, British Infantry of 7 Years War (3), Hugh de Lacy, 1185.

MI/40
British Tank Crews, 1916-18, US Airborne Insignia 1941-91, US Troops of Mexican War, 1846-48 (1), German 1908 Tunic researched, Napoleonic Canadian Fencibles Reconstructed (3), Thomas Tyldesley, 1645.

MI/41
British Gulf War Uniforms (1), Collecting WWI Art, Models of Peter Twist & David Grieve, 1850s Guardsman's Knapsack, Chasseur a Pied de la Garde, 1810, 17th Lancer, 1854, Reconstructed (2), Sir Hugh Calveley, 1351 & 1370.

MI/42
British Gulf War Uniforms (2), Filming 'The Charge of the Light Brigade' (1), WW2 Scottish Infantry Insignia, Models, Bill Horan & Derek Hansen, US Troops of Mexican War 1846-46 (2) Infantry, 1915-18 Photo Collection (1), William Coltman VC, 1918 & 1945.

MI/43
16th Lancers, Aliwal, 1846, Filming 'The Charge of the Light Brigade' (2), German War Art, 1860s, Soviet Body Armour, 1915-18 Photo Collection (2), Euromilitaire '91 report, Models of Ron Tunison, Boabdil of Granada, 1483.

MI/44
US Troops of Mexican War 1846-48 (3), Dragoons, 17th Lancer, 1854, Reconstructed (3), US Pilot's Uniform, 1918, Plains Indian War-Shirts (1), Models of Brian Stewart, Bolivar's British Legion, English Civil War Exhibits from Lancashire, Ferdinand of Aragon, 1487.

MI/45
Plains Indian War-Shirts (2), US Troops of Mexican War 1846-48 (4), Zulu War on Film, 8th Jäger Bn., 1915, German War Art, 1870s, British Bayonet Carriage, 18th-19th Cs (1), Chicago Model Show, 1991, Philip Skippon, 1625.

MI/46
Roman Legionaires Reconstructed (1), German WW2 Campaign Shields (1), US Olive Drab Field Jacket, 1991 Sevres Model Show, English Soldiers, 1544, British Stormings, Peninsular War, 18th Century Riflemen, Philip Skippon, 1645.

MI/47
US Troops of Mexican War (5) State Volunteers, Medieval Siege Engine Reconstructions, Denmark & Czechoslovakia, Portuguese Paras, Africa 1961-74 (1), Models of Bill Ottinger, German WW2 Campaign Shields (2), Roman Legionaries Reconstructed (2), Cape Mounted Rifles Personalities, John Shaw, 1815.

MI/48
1st Canadian Para Bn 1942-45 (1), Legio II Parthica, 7e Regiment de Hussards 1808, US Troops of Mexican War (6), Early Use of Machine-Guns in British Army, US Commissary Sergeants 1873-1903, Portuguese Paras, Africa, 1961-74, Michael Wittmann.

MI/49
Imperial Guard Dragoon Helmets, 1st Canadian Para Bn (2), Wehrpass and Soldbuch, Rick Scollins Portrait, Territorial Bns, King's Regt, 1908-18, Roman Legionaries Reconstructed (3), US M1943 Field Jacket, Ben McCulloch.

MI/50
Fallschirmjager, 1944-45, The Freikorps, Roman Legionaries Recreated (4), Royal Scots, 1815, British Army Manpack Radios, 1939-45, Dreyse and Chassepot needle rifles, Hector MacDonald.

MI/51
British Army Caricature, The British Resistance Movement, 1940-44(1), US 17th Infantry Regt, 1866-90, The Suffolk Regt, 1685-1913 (1), 17th Century Cuirassiers, Flak Jackets, Roman Legionaries Recreated (5), Ehud Barak.

MI/53
Essex's Foote, 1642-45, Paras in Normandy, 1944, Empresses' Dragoons Officers' Helmets, Cuera Cavalry (1), 15th King's Own Light Dragoons (Hussars) (1), Artillery at Edgehill, 71st Highland Light Infantry, NW Frontier, Sir Peter de la Billière.

MI/54
15th King's Own Light Dragoons (2), SS Totenkopfring, British Paras, 1940-42, The King's Lifeguard of Foote, US Heavy Artillery Uniforms, 1866-76, Cuera Cavalry (2), 17th Century Buff-Coats Recreated, Philip II of Macedon.

MI/55
The art of Chris Collingwood, The First China War, 1840-42, The King's Lifeguard of Horse, 1642-45, British Troops on Campaign, 1775-81, The Union Cavalryman, 1861-65, The London Regt, 1908-37 (1), German Field Caps, 1933-45 (1) Army, Greek Cypriot National Guard, John Urquhart.

MI/56
Euro-Militaire report, The London Regt (2), Argentine 25th Inf Regt, 1982, 15th King's Light Dragoons (3), Irish in Venetian Service, 1702-97, German Field Caps (2) Luftwaffe, The Czech Legion (1), The Guides at Kabul, US 17th Inf Regt Officers' Uniform, 1866-90, John Palmer Brabazon.

MI/57
Royal Canadian Naval Beach Commando 'W' (1), Chigago Model Soldier Auction, The Czech Legion (2), 17th Century Footwear Reconstructed, The London Regt (3), British Army Musicians in the 18th Century (1), German Field Caps (3) Navy & Waffen-SS, US 1st & 2nd Cavalry Regts, 1855-60, Archduke Charles of Austria.

MI/58
Quebec Voltigeurs, 1812-15, German Field Cap Insignia, 2/87th Foot in the Peninsular, Battlefields of the English Civil Wars Today (1), British Infantry Musicians, 18th Century, Royal Canadian Beach Commando 'W' (2), 14th/19th King's Hussars, Gulf War, Chicago Show Report, The London Regiment (4), Theodore Eicke.

MI/59
1st SS Division Leibstandarte 'AH', Sharpe and Harper March Again, The Bren LMG, Military Model Showcase, Battlefields of the English Civil Wars Today (2), The First Tank Battle, Royal Canadian Beach Commando 'W' (3), Geoffrey Keyes, VC.

MI/60
Panzergrenadier Division 'Grossdeutschland", 95th (Rifle) Regt of Foot, King James' Foot Sedgemoor, 1685, US Army Medics, 1857-87, 14th Century Cavalry Warfare Mamluks, Robert E. Lee.

MI/61
New South Wales Lancers (1), Croatian Warrior 9th-14th Centuries, Virginia Militia, Battlefields from the Air, King James' Foot (2), 95th (Rifle) Regt (2), SS-Feldgendarmerie, US Army Medics (2).

MI/62
Infrared Surveillance (1), New South Wales Lancers (2), Royal Guards of France (12), Germany's Dunkirk, 1945, Croatian Warrior 1400-1600, London Regt, 20th-34th Bns.

MI/63
Military Museum Guide, Royal Guards of France (3), Infrared Surveillance & Concealment (2), Croatians in the 30 Years' War, German Ribbons & Awards for Valour, 1933-45, The Cheshire Volunteer Regt, 1914-18, Afghanistan's Highland Guard.

MI/64
Royal Guards of France (3), The Scinde Campaign, 1843, Vietnam (ARVN) Marines, Lancashire Hussars (1), SS Palm Tree Camouflage, Artillery Forts at Deal & Walmer, Veterans of Kirbekan, The Young Alexander. MI/65 Royal Guards of France (4), Gwalior Campaign, Croatia's Military Border Territory, Luger Lange Pilstole '08 (1), Brudenell and Nolan (1), Lancashire Hussars (2), The Young Napoleon.

MI/66
German Guerilla Warfare Badge, Brudenell and Nolan (2), Royal Guards of France (5), Croatia and the 'National Idea', Gommencourt 1916, Luger Lange Pistole '08 (2), Egyptian Campaign 1882 (1), Hiram Ulysses S. Grant.

MI/67
Egyptian Campaign 1882 (2), British Officers' Uniforms 1795-1814 (1), 18th Century Highlanders, Armies of Akritoi, Body Armour 1915-45, The War in Yugoslavia 1941-45 (1).

MI/68
French Carabiniers, 1866, Geronimo, 1st Infantry Div, Sicily (1), Kninjas of Krajina-Serbia (1), British Officers' Uniforms 1795-1814 (2), The German War in Yugoslavia (2), Croatia in WWII, Georgi Zhukov.

MI/69
Polish Winged Hussar, 1st Northamptonshire Yeomanry, French 3rd Cuirassier Regiment, Tito's Yugoslavia to Present, British Army Uniforms 1795-1814, Serbian Warriors, Rufus Lathrop Baker.

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The Antiques Road Show on BBC television is back on air and for the *Military Illustrated* viewer it must be apparent that only very rarely does anything of military interest figure on this programme. Many families must have the odd medal or piece of uniform belonging to some ancestor but they seem not to surface. It is perhaps understandable when thinking of uniforms but medals have a rather higher profile and might be expected to attract attention.

Medals have, in general, proved to be one of the more stable elements of the auction scene over the past years with no great fluctuations in value. Most of the larger auction rooms feature medal sales and their results are usually good. This is probably the reason that Bonhams, who have already entered the arms and armour market, have now announced that they are going into the medal market. They plan to hold quarterly sales of medals, medallions, coins and banknotes. They are creating a new department to run the sales and it is just conceivable that a little more competition in this field may lead to some reduction in commission charges. This step follows the merger of Christies with Spinks who were one of the biggest sellers of medals and similar material.

One possible reason for the popularity of medals is that they are, by comparison, fairly cheap. A good pistol, a dress helmet or a fine sword will normally realise thousands of pounds. Most campaign medals will fall within the range of only a few hundred pounds. Medals also offer good opportunities for the amateur historian to carry out some satisfying research, establishing details of the medal's owner and his part in the action. Display is basically simple and, to a point, each medal is unique. The medal may have been issued in its thousands but any particular named example was issued to one specific individual and as such must be unique. The collector has, in a way, made a direct link with history.

Obviously groups of medals or decorations can realise higher prices which reflect their special quality and so place themselves beyond the reach of the average collector – few can afford Victoria Crosses. Medals are a very good example of the value of a good provenance when selling or buying in auction. The provenance may increase the value of an object many times and once again the collector is buying a direct link with fame or history.

The English Civil War has been much in the public eye over the last year as its outbreak in 1642 was commemorated. Such interest dies slowly and there was a recent sale at Sotheby's in late December which reawakened much extra interest. The sale was offering a range of documents, pamphlets and other ephemera associated with one of the most famous of Civil War generals, Thomas Lord Fairfax, victor at the crucial battle of Naseby in June 1645 which virtually ended any hopes that Charles I may have had of winning his war.

The library from the Yorkshire home of the Fairfax family was sold comprising some 5,000 items sold in over 500 lots. The majority of the contents were concerned with the Civil Wars but some later material has strong American associations. Ironically, much of these archives were re-united by an American descendant of the family after having been sold by the family to pay debts in the 18th century. George Washington, the first United States President, was related by marriage to the Fairfax family who had been landowners in Virginia.

The sale results were mixed with some good prices but some rather surprising unsold items. The grand total was £441,582, a little less than anticipated, and a number of lots which were unsold included several relating to Virginia and George Washington. Obviously the American market was not especially interested, which is perhaps a little surprising.

Much of the Civil War material was purchased by the big dealers and it is not known whether they were acting for institutions or whether the collection will be split and sold piecemeal. If indeed the collection is scattered it will sadden researchers of the 17th century for the run of pamphlets was very extensive. The large catalogue produced by Sotheby's will prove a very useful reference book for those with an interest in the Civil War.

The arms and armour market in general was fairly quiet over the holiday period but there was a good sale in Zurich in February and Wallis and Wallis had a sale early in January. It is a comment on the state of this field of collecting when it is remembered that some ten years or so ago Sothebys and Christie's would each be holding nine sales a year and Phillips would probably offer somewhat less. As far as the larger rooms are concerned the joint total for the year probably only reached about nine, if that. In the USA there seems to be a little more activity and companies such as Butterfields produce catalogues which are bumper issues full of fine pieces. In this country recession, restrictions and redundancies have reduced the market to a very low level.

Frederick Wilkinson

Coming in next month's magazine:

D-Day Competition

Sharpe at Badajoz

Dark Ages Battle

Disaster at D-Day Book Feature

Bryan Fosten – military artist profile

Strange Warriors

Buffalo Soldiers


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